

DEPARTMENT OF THE NAVY



1995  
BASE REALIGNMENT  
AND  
CLOSURE ACTION

NAVAL SEA SYSTEMS COMMAND

OCT. 97

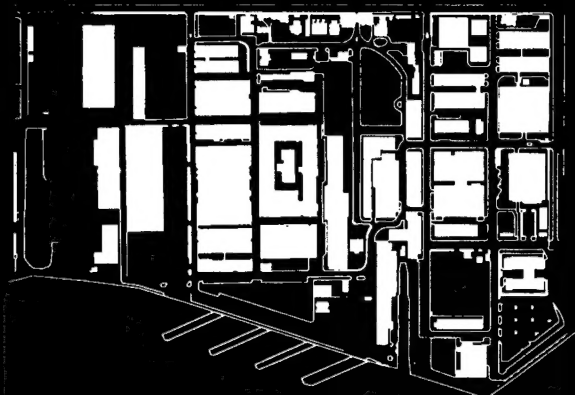
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WASHINGTON NAVY YARD

WASHINGTON DC





DEPARTMENT OF THE NAVY  
ENGINEERING FIELD ACTIVITY CHESAPEAKE  
WASHINGTON NAVY YARD BUILDING 212  
901 M STREET SE  
WASHINGTON DC 20374-5018

IN REPLY REFER TO:  
11010  
20E/HJR

OCT 3 1997

TO WHOM IT MAY CONCERN,

The Final Environmental Impact Statement (FEIS) addressing the anticipated effects of the 1995 Base Realignment and Closure relocation of the Naval Sea System Command from Arlington, Virginia (Crystal City) to the Washington Navy Yard, Washington, DC is attached for your review. The relocation is being conducted in accordance with the Defense Base Closure and Realignment Act (Public Law 101-510), as implemented by the 1995 Base Realignment and Closure (BRAC) process. The proposed action would involve the renovation, demolition and/or new construction and operation of facilities at the WNY to meet the requirements of the realigned activities. The NAVSEA functions in an administrative capacity and employs approximately 4,100 personnel. The general requirements for NAVSEA activities includes 1,000,000 square feet of office space, parking for approximately 2,000 vehicles (employees and visitors), and the necessary infrastructure and support to facilitate operations.

The FEIS includes and addresses comments received on the draft EIS, which was issued in December 1996. The FEIS is being distributed to Federal, state, and local government agencies, local libraries, and concerned citizens and groups that have expressed an interest in this action. The comment period for this FEIS will begin on October 10, 1997, with the publication of a notice of availability in the Federal Register. Comments must be received no later than November 10, 1997. Please address your comments to: Department of the Navy, Engineering Field Activity, Chesapeake, Naval Facilities Engineering Command, 901 M street SE, Building 212, Washington Navy Yard, Washington, DC 20374-5018, Attention Mr. Hank Riek. Telephone inquiries may be made to (202) 685-3064, Fax (202) 685-3350.

Thank you for your interest and participation.

Respectfully,

*Micheal Bryan*  
Micheal Bryan

Head, Environmental Planning Branch  
By direction of the Commanding Officer



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## Cover Sheet

### Responsible Agency:

U.S. Department of the Navy

### Proposed Action:

To provide the facilities and operational requirements needed to implement the 1995 Base Closure and Realignment Commission recommendations to relocate the Naval Sea Systems Command Headquarters to the Washington Navy Yard, Washington, DC.

### Designation:

Final Environmental Impact Statement

### Abstract:

This Environmental Impact Statement evaluates the potential effects of developing up to 1,000,000 square feet of additional office space at the Washington Navy Yard to support the relocation of 4,100 personnel associated with the Naval Sea System Command. The purpose of and need for the proposed action, alternatives considered, affected environment and environmental consequences are presented in the Environmental Impact Statement. Four alternative concept development plans are evaluated in detail.

A Cultural Resources Assessment of Effect (CRAE) has been prepared concurrent with this Environmental Impact Statement, as is an update to the 1995 Transportation Management Plan for the Washington Navy Yard.

### Availability:

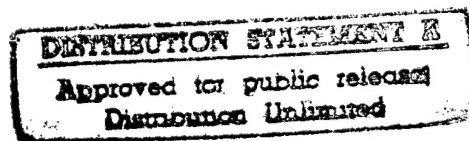
October 1997

**The public review period ends 30 days following the date of the Federal Register notice for this Final Environmental Impact Statement**

**For additional information concerning this document or to send comments please contact:**

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## EXECUTIVE SUMMARY

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## Executive Summary

This environmental impact statement (EIS) has been prepared pursuant to Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) "Regulations for Implementing the Procedural Provisions of NEPA" 40 Code of Federal Regulations (CFR) Part 1500, and the Navy's Environmental and Natural Resources Program Manual (OPNAVINST 5090.1B). This EIS has also been prepared within the parameters for NEPA analysis as identified within the Base Closure and Realignment Act of 1990.

## Background

As a result of the 1995 Defense Base Realignment and Closure (BRAC) Commission recommendations, the Naval Sea Systems Command Headquarters (NAVSEA) will be relocated from leased space in Arlington, Virginia to the Washington Navy Yard (WNY) in southeast Washington, DC. The 4,100 personnel involved in the relocation function in an administrative capacity. Projects associated with the relocation will involve the development of approximately 1,000,000 square feet of administrative space, parking for employees and visitors, and the necessary infrastructure and services to support the functional operation of the facilities and personnel.

## Proposed Action and Alternatives

The proposed action analyzed in this EIS is to provide the necessary facilities and/or operational requirements to implement the 1995 BRAC relocation to the WNY. Despite extensive buildup of the WNY property, sufficient office space to accommodate NAVSEA personnel is not available on the base. According to the WNY Base Master Plan, development of additional office space should focus on several large structures in the western portion of the installation. Four alternatives have been identified that would satisfy NAVSEA requirements. While all of the alternatives deal with essentially the same group of buildings, they vary by the degree of renovation, demolition, and new construction. The no action alternative would not provide adequate facilities needed to implement the mandated BRAC relocation of NAVSEA and has been dismissed as a non-viable alternative.

**Alternative 1** — This is the Navy's preferred alternative. It would involve the renovation of three buildings, demolition of five buildings, and construction of three new structures including an eight-level parking garage.

**Alternative 2** — This alternative would be limited to the renovation of six existing buildings and the construction of a 12-level parking garage within an existing parking area.

**Alternative 3** — This alternative would result in the demolition of a large block of six adjacent buildings and construction of one new office structure in their place. Two additional buildings would be renovated for office space and one large structure would be converted into a seven-level parking garage.

**Alternative 4** — In this alternative, the same large block of six buildings would be demolished and replaced with a new office structure. One large structure would undergo renovation and enlargement by addition. This alternative differs from Alternative 3 in that parking would be incorporated into the two lower levels of these structures.

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All four alternatives would include: landscaping in and around buildings and the waterfront area; minor modification of interior roadways and traffic controls; utility component upgrades and service line installations; the installation of chiller plant components in and around Building 116; development and implementation of an erosion and sediment control plan; and a stormwater management plan; and associate support services. **In addition, all four alternatives would include remediation of contamination directly associated with the various project components. While the EIS discusses the impacts associated with contamination within the project site, it was never intended to address base-wide clean-up efforts which are being carried out under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).** A summary of the impacts for each alternative is provided on the following table.

### **Summary of Impacts**

The following table summarizes and compares the effects of each alternative in relation to the pertinent environmental issues.

## Summary Impact Matrix

Resource	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Topography, Geology, Soils	Few, if any, impacts to topography, geology, or soils are expected to occur as a result of implementing any of the alternatives.			
Water Resources	The use of erosion and sediment controls during construction, and the incorporation of stormwater control management components into the project design will serve to mitigate impacts to water quality that could result from implementation of the alternatives.			
Floodplains	The project area is within the 100-year floodplain. Designs for new construction and/or modification of existing structures will include flood protection measures.			
Vegetation and Wildlife	Little, if any, effect to vegetation or wildlife is expected to result from implementation of any of the alternatives.			
Air Quality	Project-related emissions were determined to be well below threshold levels identified by the EPA in the conformity regulations as having the potential to impact regional efforts to attain clean air standards.			
Noise	A slight increase in daytime noise levels is expected to result from construction activities and increased traffic levels along roadways within and adjacent to the WNY during the morning and evening rush hours.			
Infrastructure and Utilities	Overall, the existing infrastructure and utilities are adequate to meet the anticipated demands of the proposed facilities. Minor upgrades and installation of connector lines may be required. A new chiller system will be installed to provide air conditioning for the buildings within the project area.			
Transportation	The proposed number of new parking spaces to be developed at the WNY through implementation of the alternatives will impose a limitation on the number of vehicles that can be accommodated and reduce the number of new vehicles added to local traffic. The increases in vehicle numbers that would occur are not expected to significantly change existing traffic operations within the area.			
Architectural Resources	High level of effect on the historic district due to the extensive demolition of contributing resources and the major new construction.	Medium level of effect on the historic district due to the new construction and interior alterations to historic buildings.	High level of effect on the historic district due to the extensive demolition of contributing resources and the major new construction.	High level of effect on the historic district due to the extensive demolition of contributing resources and the major new construction.
Archaeological Resources	Impact to possible early nineteenth-century waterfront features and landfill deposits east of Building 197. Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.	Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.	Impact to possible early nineteenth-century waterfront features and landfill deposits east of Building 197. Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.	Impact to possible early nineteenth-century waterfront features and landfill deposits east of Building 197. Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.
Population	The BRAC action will increase the workday population at the WNY. Personnel associated with the relocation are not expected to change their place of residence as a result of this BRAC action.			
Services	The creation of additional office space at the WNY will generate a need for maintenance and janitorial services as well as office supplies and midday dining facilities within the area.			
Land Use, Zoning, Plans and Policies	The relocation and development of office space at the WNY correspond with the WNY Master Plan as well as regional planning efforts. The relocation and associated facilities are being coordinated with the National Capital Planning Commission.			
Environmental Justice	None of the alternatives are anticipated to have disproportionately high or adverse human health or environmental effects on minority or low-income populations.			
Hazardous Materials/Waste	The proposed projects and operations are not intended to use or generate hazardous materials. Existing contamination associated with the project components would be managed in accordance with applicable regulatory and procedural guidelines to provide a safe environment for workers and minimize off-site contamination.			

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## 1.0 BACKGROUND

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## 1.0 Background

The Defense Base Closure and Realignment Act of 1990 (DBCRA) (Public Law 101-510) was enacted in response to changing military requirements. It was designed to provide a fair process that would result in the timely closure and realignment of military installations inside the United States. As part of this process the Act identified specific procedures, submissions, and timelines for implementing the closure and realignment actions. It also established a Base Closure and Realignment (BRAC) Commission, as an integral part of the review and approval process. The Act called for three separate iterations, or rounds, that would result in the identification of installations to be closed or realigned. The first of these rounds took place in 1991, with additional rounds following in 1993 and 1995.

The military services used criteria, established by the Secretary of Defense and approved by Congress, and also a force structure plan provided by the Joint Chiefs of Staff, to formulate and submit a list of installations to be closed or realigned. These recommendations were then reviewed by the Secretary of Defense and sent to the BRAC Commission, which evaluated the recommendations, held public hearings, and transmitted its findings and recommendations to the President. Upon approval by the President and Congress, the recommendations have the force of law and can only be changed by a subsequent Commission action or by a direct act of Congress. The activities, budgets, and projects associated with implementing these decisions are commonly referred to as "BRAC."

The DBCRA will result in the closure of numerous military bases throughout the nation and the relocation of many activities to installations that are remaining open. All BRAC actions must be initiated within two years and completed within six years of the date the BRAC package is approved by the President and forwarded to Congress.

The 1995 round of BRAC resulted in the closure or realignment of **105** military installations and redirected 27 previously approved BRAC recommendations. One of these redirections involves a change in receiver sites for the Naval Sea Systems Command Headquarters (NAVSEA), which is currently located in leased space in Arlington, Virginia. The receiver site for NAVSEA was changed from the Naval Surface Warfare Center (NSWC) White Oak facility in Silver Spring, Maryland to the "...Washington Navy Yard, Washington, DC or other government-owned property in the metropolitan Washington, DC area." **As identified in the 1995 BRAC Commission recommendations, NAVSEA includes the Naval Sea System Command, the Nuclear Propulsion Directorate (SEA 08), the Human Resources Offices supporting the Naval Sea System Command, and associated Program Executive Officers.**

Therefore, the receiver site for NAVSEA, in consideration of the scope and function, had to meet the following fundamental criteria:

1. It must have approximately 1,000,000 square feet of standard office space or a comparable amount of suitable real property to convert and/or build upon for this need.

### **Discussion of Criterion No. 1:**

**Due to the close functional interrelationship of its components, all NAVSEA Headquarters space must be co-located within a single building or closely related**

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complex of buildings. At sites located outside the central employment area of the City, approximately 42 acres are required to satisfy this requirement. At the Washington Navy Yard or other sites located within the central employment area, eighteen to nineteen acres are required. The smaller land requirement for the more urbanized sites is due to the existence of a tight urban street grid and traditionally higher levels of site coverage by buildings. For example, a typical residence in downtown Washington, DC neighborhoods would have minimal, if any, sideyards and a very small front yard. A similarly sized home in the outlying neighborhoods would tend to be "detached" with larger yards on all sides. This pattern of development means that more land is typically required at outlying sites than at close-in sites. Also, the amount of employee parking required at a particular site, and thus the associated land requirement, will vary somewhat depending upon the availability of public transportation to serve the employees. As with any federal project in the Washington, DC metropolitan area, the development of any potential site for NAVSEA Headquarters will have to meet the requirements associated with the legally mandated review by the National Capital Planning Commission (NCPC). Among the considerations of NCPC regarding the siting of large employment centers such as NAVSEA Headquarters have consistently been the following: a desire that the site be served by public transportation, and a desire that the development be consistent with local development plans and policies.

2. The space must be available to the Navy on a timely and unencumbered basis, so that adequate space for NAVSEA functions can be provided at the receiver site within the designated appropriations and scheduled implementation date set by Congress.

#### **Discussion of Criterion No.2:**

The Base Closure and Realignment Act of 1990 requires that all approved closures and realignments be complete within six years of the date that the President forwards the Base Closure and Realignment Commission's recommendations to Congress. In the case of NAVSEA, this means that the relocation of its headquarters from its current leased space to its new receiver site must be completed by July 2001.

The Washington Navy Yard (WNY), located in Southeast Washington, DC, was evaluated extensively as a receiver site for NAVSEA by the 1995 Base Closure and Realignment Commission during its deliberations on the proposed closure of NSWC White Oak, and is cited specifically in the Commission's Report. The Commission also left open the possibility that the Department of the Navy could consider alternative receiver sites in the Washington, DC metropolitan area, if necessary, to accommodate the NAVSEA relocation. A review of alternative Government-owned sites in the Washington, DC area, however, has resulted in a finding that there are no feasible alternatives to the Washington Navy Yard.

Other Department of the Navy sites which were considered but which failed to meet the above criteria include:

**NSWC Carderock, Maryland**

No site exists at NSWC Carderock which can accommodate a large administrative project such as NAVSEA Headquarters.

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The Naval Surface Warfare Center, Carderock Division (NSWC/CD) consists of a 183 acre site located in Montgomery County, Maryland, approximately 12 miles northwest of downtown Washington, DC. The property is bounded on the south and west by the Clara Barton Parkway which is an extension of the George Washington Parkway, on the north by MacArthur Boulevard, and on the east by Interstate 495, the Capital Beltway. Surrounding uses consist of National Park and Parkway property, and low density residential development.

The mission of NSWC/CD is to support research, design and testing of systems for Navy ships.

The NSWC/CD property is dominated by the David Taylor Model Tow Basin, an immense linear structure over 3,000 feet long which occupies the center portion of the base. This unique facility was constructed in 1937-39 to replace an earlier, smaller tow basin at the Washington Navy Yard. The Carderock site was chosen for the facility because its underlying stratum of bedrock provided the critical support required for tow basin rails, and its proximity to the Potomac River would assure a continuing supply of suitable water for the basin. Alongside the Tow Basin are dozens of buildings and structures which support the RDT&E mission.

In recognition of its unique character and historic significance, the Tow Basin (Building 4) has been listed on the National Register of Historic Places, along with Buildings 1, 2, and 3 which are attached to its west face. Also of historic significance is the nearby Chesapeake and Ohio (C&O) Canal National Historic Park, which is listed on the National Register of Historic Places and runs immediately alongside Clara Barton Parkway. Additionally, the Parkway itself has also been determined eligible for the National Register of Historic Places. The presence of these resources imposes significant limitations on development of west half of the base (that is, the land area west of the Tow Basin). Specifically, the lawn area (approximately 11 acres) which lies between Buildings 1, 2, and 3 and the Clara Barton Parkway comprises a scenic view corridor which contributes significantly to the Navy-owned National Register resource. The lawn area further provides a central campus quadrangle which is the principal defining visual element of the area. In addition, development on the west half of the base must maintain a landscaped buffer from the Clara Barton Parkway to preserve its view corridor through the area. In its review of the recently completed NSWC/CD Ship Materials Technology Center project, the National Capital Planning Commission (NCPC) reiterated the concerns of the Maryland National Capital Park and Planning Commission, the National Park Service, and its own staff that visual impacts on the Parkway must be minimized by maintaining the landscaped buffer along the western boundary of the base.

The required visual buffers plus previous BRAC construction on the west half of the base leave little additional development potential. The new Ship Materials Technology Center, a project comprising 147,000 square feet, accommodates RDT&E functions realigned under BRAC 91 from NSWC/Annapolis Laboratory, and utilized one of the last remaining potential development sites on the west portion of the base. As noted in the NCPC Executive Director's Report on the project, it provides physical "closure", that is, it completes the framing of the central "campus quadrangle" area west of Buildings 1, 2, and 3. Remaining potential development areas on the west half of the base include a small triangular area of about three acres at the southeast corner of the base, and a larger area,

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about seven acres, between Building 18 and Building 12. The latter site, however, is an area of poorly drained soils, approximately half of which is wetlands. Neither of these sites would accommodate a large project such as NAVSEA Headquarters.

The eastern portion of the base (land area east of the Tow Basin) also has serious constraints to any new development which is not associated with the RDT&E mission. The decision by the 1995 Base Closure and Realignment Commission to close NSWC White Oak has resulted in the realignment to the Carderock site of the Ship Magnetic Signature Control Research and Development mission. Sites must be set aside for seven new buildings, as well as for additions to two existing buildings. For the most part these requirements encumber the northeast and southeast areas of the base. Of particular note is a required Electromagnetic Silencing complex consisting of a laboratory and other supporting structures. To perform the mission associated with this facility, a surrounding electromagnetic clear zone of 800 foot diameter must be maintained, within which non-related new construction must be prohibited. An electromagnetic survey of the entire base has established only one location on base, an open area to the northeast between Buildings 18 and 121, where the test equipment will function properly. Utilization of this area for the electromagnetic test function effectively precludes any substantial new construction in the northeast portion of the NSWC/CD property. To the southeast, a site has been set aside for an Advanced Materials Facility. Additional constraints in this area of the base include wetlands, a flood prone area, and a former landfill site. No significant development capacity exists in this area. The only area within the eastern half of the base which appears to have significant development capacity is the existing employee picnic/recreational area located between the Tow Basin and MacArthur Boulevard. This area comprises 8 to 10 acres. Although it would result in the loss of the existing employee recreational area, the site could accommodate a new building in the 200-250,000 square foot range, assuming that structured, versus surface, parking is built and that one space is provided for each two employees. Such a project would provide only 20 to 25 percent of the space required by NAVSEA Headquarters.

#### **National Naval Medical Center (NNMC), Bethesda, Maryland**

No site exists at NNMC Bethesda which can accommodate NAVSEA Headquarters.

The National Naval Medical Center in Bethesda, Montgomery County, Maryland is the Navy's premier medical installation and the host of eight major health science related tenant commands such as the Armed Forces Radiobiology Institute and the National Naval Dental Center. It is also the site of the Uniformed Services University of the Health Sciences.

NNMC's 243 acre complex north of Jones Bridge Road and east of Wisconsin Avenue contains a dense network of buildings behind and flanking the original and emblematic 1942 Central Tower Block designed under the supervision of architect Paul Philippe Cret after a conceptual sketch by President Franklin D. Roosevelt. The Central Tower Block faces Wisconsin Avenue across a sweeping lawn; the building is listed on the National Register of Historic Places, and its viewshed has been widely recognized as a significant part of the historic integrity of the property.

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The NNMC property is heavily built up. It has about four and a half million square feet of space in 73 buildings, the largest of which are contained in a 1980 addition to the main hospital complex. All buildings except the landmark tower are low to mid-rise to protect the views of the tower. Parking at the base is tight for the 6,500 employees and 2,500 visitors, despite the presence of two multi-level parking garages. The base is bisected by Stoney Creek, and much of the land area in the vicinity of the Creek is steep and heavily wooded. The combination of difficult topography, the protected viewshed associated with the Central Tower Block, and the extensive previous development of the NNMC site leaves little remaining capacity for future construction.

The one portion of the base which could have potential for significant future development is the employee ballfield and recreational area located north of the Uniformed Services University of the Health Sciences. This is the only remaining area of the base available for outdoor field sports to serve the large on-base population. Moreover, it is located in the most remote corner of the property accessible by a winding two lane road which is remote from the existing employee gates at the installation. Immediately adjacent to, and east of, the ballfield area is Bethesda's Hawkins Lane Historic District, a traditional African American community of quiet residential character which would be heavily impacted by any large scale construction on nearby areas of the NNMC property. Not including the areas of steep slopes, there are nine to ten acres of developable area present, if the base were willing to forgo the use of the site for the recreational needs of its employees. At a mid-rise density the site could accommodate an office building of up to 300,000 square feet plus structured parking for employees and visitors, assuming a parking ratio of one space for each three employees. This is less than one-third of the space required to support NAVSEA Headquarters.

#### **NSWC White Oak, Maryland**

The Naval Surface Warfare Center, White Oak. Maryland is not available for the Navy to consider as a receiver site for NAVSEA Headquarters.

The base at White Oak consists of over 700 acres of land located in Prince George's and Montgomery Counties in Maryland. The base is an approved BRAC 1995 closure. In accordance with required disposal procedures, the White Oak property has been formally declared excess to Department of the Navy needs. During the federal agency screening process associated with the disposal action, the General Services Administration requested the White Oak property. It will be transferred by DoN to the General Services Administration in the fall of 1997.

#### **Naval Reserve Center (NRC), Adelphi, Maryland**

NRC Adelphi is not big enough to accommodate NAVSEA Headquarters.

This small property, approximately four and a half acres, has been the site of an active Naval Reserve Center since 1960. It is located on Powder Mill Road in Prince George's County, Maryland immediately south of, and surrounded on three sides by, the Army Research Laboratory (formerly known as Harry Diamond Laboratories). On its fourth



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side, to the south, is a low density residential neighborhood. The limited land area at the Adelphi site is fully utilized by the Reserve Center buildings and associated parking.

#### **Naval Security Station (NAVSECSTA), Northwest Washington, DC**

NAVSECSTA cannot physically accommodate NAVSEA Headquarters. The limited available capacity at the site will be utilized by smaller Navy commands which must be relocated from leased space in the metropolitan area.

The Naval Security Station property consists of approximately 38 acres located in Northwest Washington, DC at the intersection of Massachusetts and Nebraska Avenues at Ward Circle. The property, developed in 1910 as the Mount Vernon Seminary for Girls, was acquired by the Department of the Navy in 1942. Because the property was on high ground with line-of-site connections to the Pentagon, Fort Meade and other military installations in the region, it served as an important communications link between military sites during World War II. It was also the site of historically important cryptological work which had a significant impact on the outcome of the War.

Today, the property is surrounded by American University and the Swedish and Japanese Ambassadors' residences to the west and north, by the National Presbyterian Church and NBC/WRC broadcast facility to the north and east, by Glover/Archibald Park to the east, and by apartment development to the south.

Subsequent to its acquisition of the property, the Navy has developed it incrementally as an extension of the original girls' school complex, so that the entire site comprises a medium density, campus-like setting. In 1993, the original girls' school complex was determined to be eligible for the National Register of Historic Places. The only remaining open areas at the base are two parking lots required for base employees, and narrow green space buffers along the east and south edges of the property. These buffer areas are too small and too steep in topography to accommodate new construction.

The 1993 Base Closure and Realignment Commission identified the Nebraska Avenue (Security Station) site as a potential receiver site for Department of the Navy commands to be realigned from commercial leased space in the Washington, DC area. In response, DoN has identified several small commands to backfill the available capacity at the site, which consists of approximately 200,000 square feet. Renovations of the buildings to be backfilled will be underway by November 1997, and the space must be re-occupied by July 1999 to comply with the six year implementation requirement contained in the Base Closure and Realignment Act of 1990.

#### **U. S. Naval Observatory, Northwest Washington, DC**

The Naval Observatory property cannot accommodate NAVSEA Headquarters. It does not have a site big enough to accommodate NAVSEA, and if it did the site could not be used for that purpose because of unique and severe mission constraints.



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The U. S. Naval Observatory is a 72 acre property located on Massachusetts Avenue in Northwest Washington, DC. The base is situated in a neighborhood of mixed land uses which include embassies of foreign governments, single family housing, parkland, and some commercial development to the south along nearby Wisconsin Avenue.

The base contains the Vice President's residential compound and associated security buffers, the Naval Observatory Master Clock which is the source of U.S. Standard Time, and also supports a number of functions relating to astronomical observations. The latter includes a unique mission in the field of astrometry which provides vital navigational base data required for Naval operations around the world.

The Naval Observatory property is severely constrained for new development by:

- 1) security requirements associated with the Vice President's residential compound, and
- 2) the requirement to sustain the astrometrical mission at the site.

The astrometrical mission, which is uniquely site-specific to the Naval Observatory property, would be adversely affected by construction of any large building or structure at the base or on adjacent privately owned property. In recognition of this and other potential adverse effects relating to the security of the Vice President, the Department of the Navy and the National Capital Planning Commission requested the District of Columbia Planning and Zoning Commission to enact a special overlay zoning district, the Naval Observatory Precinct District (NOPD), to protect the vital Federal interest in the area. Aside from the security concerns which would be associated with tall buildings overlooking the residential compound, increased building mass in the vicinity of the Observatory would cause a bending of light rays originating from celestial bodies. Such a condition would devastate the astrometrical mission of the Observatory. Based on scientific testimony presented and other concerns, the NOPD zoning district was approved by the Planning and Zoning Commission, and today provides strict limitations on the height and bulk of all buildings on private property in the area, effectively precluding the construction of any large project. Similarly, no large scale building or structure can be constructed on the base itself without destroying the Observatory's astrometrical mission.

Potomac Annex Property, 23rd Street and Constitution Avenue, Northwest Washington, DC

The Potomac Annex property has no unused development capacity which can be utilized by the Department of the Navy, and cannot accommodate NAVSEA Headquarters.

What is today called "Potomac Annex" was the original site of the U.S. Naval Observatory, was later a Naval hospital, and is currently occupied by Navy's Bureau of Medicine and Surgery (BUMED). The site, which comprises approximately 12 acres, is one of the oldest Federal sites in the nation, having been acquired in 1791. The property overlooks the Capitol Mall and has sweeping views of the Lincoln Memorial and other monuments of the nation's Capital.

The original Naval Observatory building, Building 2, was completed in 1844 and is on the National Register of Historic Places. This building plus the surrounding later buildings

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comprise an ensemble of architecturally related buildings, similar in materials, color and scale, which taken together occupies virtually all buildable capacity at the north portion of the site. All space in these buildings is already committed to long term uses, such as headquarters offices for the Navy's Bureau of Medicine and Surgery and quarters for senior Naval officers. No space is available for NAVSEA Headquarters

The south portion of the Potomac Annex site is currently used for employee parking. This area, about three acres, will be transferred by the Department of the Navy to the U.S. Institute of Peace (IOP) for eventual construction of a building to house IOP functions. This property transfer is required by public law (Section 2831 of the National Defense Authorization Act for fiscal year 1997).

#### **Marine Barracks, 8th and I Streets, Southeast Washington, DC**

There is no unused development capacity at the Marine Barracks, 8th and I property. NAVSEA cannot be accommodated at this site.

The Marine Barracks, 8th and I, is a very small facility, approximately five acres total, located in a mixed commercial and residential section of Southeast Washington, DC. The site for the Barracks was selected on horseback by Thomas Jefferson and Commandant William Burrows in 1801. The base provides troop housing and associated support, and is also the location of senior officers' quarters, including the residence of the Commandant of the Marine Corps.

The site and buildings at 8th and I, with the exception of Building 20, are a National Historic Landmark and under the protection of the National Historic Preservation Act of 1966. Building 20 is a more recent multi-purpose facility constructed in 1975 on land across the street from the original barracks. The land upon which Building 20 sits was acquired by the Department of the Navy in 1971, as there was no expansion space within the original barracks compound to accommodate a growing Marine Corps requirement for space. The land acquired for Building 20 is tightly constrained by the adjacent Southeast/Southwest Freeway and surrounding city street grid, so that the building virtually covers the site.

The only open land at the Marine Barracks is a small parade field enclosed within the original barracks compound. This parade field is used for ceremonies and military pageants which are an integral part of the Marine Barracks mission.

#### **Naval Maritime Intelligence Center, Suitland, Maryland**

No site exists at the Navy's Suitland property which could accommodate NAVSEA Headquarters. The property is heavily constrained by ongoing intelligence functions which encumber the entire acreage.

In 1989, the Department of the Navy acquired, as authorized by Public Law 100-456, this approximately 42 acre site in Suitland, Maryland from the General Services Administration for the specific purpose of permitting Navy to construct and operate a new

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facility for the Naval Intelligence Command (NAVINTCOM). Prior to this, NAVINTCOM had been located in scattered and antiquated facilities in the Washington, DC area.

The new Navy facility at Suitland, completed in 1993, occupies a site which is entirely enclosed within a secure perimeter fence and associated fifty foot security buffer. Within the enclosed compound, which includes the entire site, the available real estate is used for: a 587,000 square foot headquarters building; a 100-space surface parking lot for visitors; a multi-level parking garage for 840 vehicles; communications antennae; a wetlands area built as an environmental mitigation to replace other wetlands at the site which were displaced by construction, and which also serves as a storm water retention device; entrance and perimeter roadways; and, a landscaped strip to provide required visual screening of the building from the adjacent Suitland Parkway to the south. The above uses encumber virtually the entire land area of the Navy's Suitland site. The physical constraints of the property dictate that any addition of space at the Suitland facility, if undertaken in the future, would of necessity be of very limited scope, comprising a small fraction of the original building area, and would be closely related in mission to the intelligence operations for which the site was acquired.

#### **Naval Air Facility Washington, Andrews Air Force Base, Maryland**

NAF Andrews contains no site which can accommodate a large administrative project such as NAVSEA Headquarters.

Naval Air Facility (NAF) Washington occupies 115 acres consisting of five non-contiguous parcels or enclaves within the 4,982 acre Andrews Air Force Base at Camp Springs, Prince George's County, Maryland. Andrews AFB lies just outside the Capital Beltway, I-495/I-95. NAF's primary mission is to support and train Navy and Marine Corps aviation reserve units; as such, its mission is highly compatible with and draws many support services from the surrounding Air Force Base.

The five NAF enclaves consist of: a) the Operational Facilities, b) the Supply Complex, c) the Jet Engine Test Pad—all east of the Andrews runways— d) the Bachelor Enlisted Quarters Area, and e) the Bachelor Officers Quarters Area—all to the west of the runways.

All with the exception of (a) above are small, fully built-out parcels utilized for a single land use such as housing or supply. They have no open space or underutilized land.

Parcel (a), the Operational Area, is the heart of NAF and constitutes almost two-thirds of the station's land holdings. It comprises rows of hangars and other operational buildings to the east and north of a fifty acre aircraft parking apron adjacent to the Air Force Base's runways to the west. From time to time, NAF has built small additions to its hangars and new structures in the 10,000 to 16,000 square foot range. However, not only is there no available site for a project the magnitude of the NAVSEA Headquarters, but such a use would be incompatible with the operational mission of the Naval Air Facility.

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## Naval Computer and Telecommunications Station (NCTS), Cheltenham, Maryland

Because no suitable site exists, and because the base has a severe access problem which cannot be corrected within the timeframe available for BRAC realignments, Navy's Cheltenham property cannot accommodate NAVSEA Headquarters.

The original 559 acre site of NCTS Cheltenham was acquired by the Navy in 1935, with an additional four acres acquired in 1943, for the purpose of providing radio communications between various sites in the Washington, DC/Annapolis, Maryland area. In 1973, the General Services Administration, under the guidelines of Executive Order 11724, surveyed the site and determined that 316 acres were excess to the needs of the Navy. The land identified by GSA is now utilized by the Department of Energy (124 acres) for antenna fields, and by the Prince George's County Government (192 acres) for a firefighting school and parkland.

The remaining 247 acres of NCTS Cheltenham lies within an area of Prince George's County which is zoned for low density residential and served by two lane, residential scale roads. The base itself is designated as Open Space by the County approved Master Plan and Sectional Map Amendment (Subregion V, September 1993).

Most of the remaining 247 acres at Cheltenham is encumbered by permanent buildings and structures relating to the communications mission or by areas of steep slopes (greater than 15 percent grade). An employee outdoor recreational area, located in the south-central area of the base, comprises ten acres, and is too small to accommodate NAVSEA Headquarters, which would require approximately 42 acres at a suburban site such as Cheltenham. At the north end of the base is a smaller, lightly utilized area, approximately six acres, which is also incapable of supporting a large administrative project.

In 1991, the Navy identified a 37 acre potential development site at Cheltenham in connection with a search for a suitable location for new build-to-lease family housing. This parcel, located in the northeast portion of the base, is encumbered by a central area of steep slopes (over 15 percent grade, comprising about 25 percent of the site), and by a drainage swale to the east. The remaining area is approximately 22 acres. Although this is insufficient to accommodate a project on the scale of NAVSEA Headquarters, the site was thought to have some potential as a site for Navy family housing. However, studies showed that the surrounding road network could not support even the moderate levels of vehicular traffic which would be generated by the desired 284 units of family housing. An April 1991 study entitled "Cheltenham 802 Housing Traffic Impact Study" documented: 1) existing traffic levels in the area; 2) projected background levels, taking into account all approved development projects and funded roadway improvements in the area; and 3) total traffic loadings. The latter included the background level plus the projected loading from the proposed new Navy housing, and concluded that levels of service at key intersections and roadways in the area would be at an unacceptable level if the housing were built. The 284 units of housing would have generated a small fraction of the peak hour automobile trips that would be associated with a big administrative employer such as NAVSEA Headquarters.

The NCTS Cheltenham site is poorly served by public transportation (the nearest Metrobus service is at Clinton Plaza, approximately two and a half miles from the site);

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therefore traffic impacts of any development proposal are intensified. A high percentage of employees working at the site must rely on the automobile to get to work, and trip generation rates are greatly increased as compared to other sites in the Metropolitan area which are near a Metrorail station. Any sizable increase in the working population at NCTS Cheltenham would overwhelm the already limited road capacity in the area. The County has no programmed road improvement projects in the area to support increased employment at Cheltenham. Condemnation proceedings to obtain rights of way for expansion of roads serving the site, although theoretically available to overcome such obstacles, would sufficiently delay the project so as to make compliance with the BRAC deadline impossible.

Included in the process for upgrading roadway capacity would be: design of road improvements to a level adequate to identify right of way boundaries, compliance with the National Environmental Policy Act through preparation and public review of an environmental impact statement, acquisition of affected properties through condemnation procedures, obtaining of required permits from the state and Corps of Engineers (if wetlands are impacted), and construction of the roadway improvements.

#### **Naval Research Laboratory (NRL), Southwest Washington, DC**

The Navy's NRL property offers no site capable of accommodating NAVSEA Headquarters. This base is hemmed in, densely developed, and fully utilized.

The Naval Research Laboratory is a 129 acre, densely populated property wedged between the Potomac River on the west, Interstate 295 and the Navy's Bellevue Housing on the east, Bolling Air Force Base on the north, and the District of Columbia's Blue Plains sewage treatment facility on the south. NRL is the Navy's principal institution for high level scientific research and advanced technological development. As such, it maintains one of the highest levels of perimeter security of any Naval installation in the Washington area.

Dating from 1923, and from an even earlier initiative by Thomas Alva Edison, the Laboratory site has expanded over the years to its present limits and filled up with over 100 buildings, primarily mid-rise laboratory and industrial structures. At the time of the last installation master plan update (1989), only the most recently acquired northwest section of the base offered any vacant sites for substantial new buildings. Since then, this 19 acre area has been built out with new laboratory facilities. With the exception of a 100 to 200 foot buffer zone along the River—mandated by the National Capital Planning Commission—and the narrow landscaped mall which serves as the spine of the installation's older south section, there is virtually no open space present.

Also constraining the site is the complicated, low-capacity internal street system which serves the more than 100 buildings and scattered interstitial parking. Currently, over 3700 Laboratory employees and an estimated daily average of over 1,000 contractor personnel pass through base security at two gates and work their way to their destinations on base, straining the street system at today's activity levels.

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NRL's buildings are fully utilized to support its ongoing research mission. Because of this, no opportunities exist for displacement or conversion of existing facilities for non-RDT&E uses.

#### **Naval Station Washington Anacostia Site, Southwest Washington, DC**

Although at one time the Navy's Anacostia property had considerable unused development capacity, no site exists at the base today which could accommodate NAVSEA Headquarters.

The Naval Station Washington Anacostia Site is a 299 acre property located west of Interstate 295 and immediately north of Bolling Air Force Base in Southwest Washington, D. C. Originally a Naval Air Station, the base has become an important support facility for Department of the Navy and White House logistics functions located in the Capital area. These functions and their associated constraints on access and security encumber almost all remaining development capacity at the site. The areas which remain are not big enough to accommodate any project the scale of NAVSEA Headquarters.

A continuing construction program in the 1970's, 80's and 90's transformed Anacostia from a largely open and underutilized property in the early 1970's to today's heavily utilized and constrained property. The construction has included a large reserves complex; transportation maintenance and other Navy public works support facilities; an Air Force Base Civil Engineer complex; various support facilities for Naval uniformed personnel, including the barracks/messing/multi-purpose facility complex currently under construction; and four large and highly secure facilities associated with logistical support for White House functions. Among the latter is an operational hangar and associated landing/take off areas utilized by the HMX-1 Helicopter squadron. Except for the north end of the base, discussed below, all that remains at Anacostia are several small infill sites in the personnel support area (west-central portion of the base) which are planned for small scale uses associated with personnel support.

In 1986, the Navy performed a feasibility study to determine whether a large new headquarters building, 587,000 square feet, could be constructed at the north end of Anacostia to accommodate the Naval Intelligence Command (NAVINTCOM). At that time, a 38 acre building site was still available for development, and appeared to offer a feasible alternative for siting a new NAVINTCOM facility. Although the Anacostia site would have been expensive to use for the project due to unstable soils, the feasibility study concluded that the building could physically fit onto the site if structured parking, vice surface parking, were used. Ultimately, the Navy decided to locate the new NAVINTCOM facility in Suitland, Maryland, because, among other factors, the soils conditions at Suitland were more favorable to construction of a large project. In recent years, two buildings, a child care center (Building 401) and a family welcome center (Building 414), have been constructed in the area addressed by the feasibility study, precluding its use for a facility the size of the original NAVINTCOM space program (587,000 square feet). Of the original 38 acres only 21 acres remain, which is sufficient to accommodate approximately one half of the NAVSEA Headquarters requirement (1,000,000 square feet).



Sites at Anacostia cannot be built out at the higher densities which are attainable at the Washington Navy Yard. Extremely bad soils provide an engineering/cost constraint, but, more importantly, the entire Bolling/Anacostia tract is heavily limited by the requirement to protect vistas from Interstate 295 to the Monumental Core of the Nation's Capital from visual intrusion by high-bulk buildings. For Navy projects at Anacostia, these limits are enforced through the legally mandated project review process of two federal oversight commissions: the National Capital Planning Commission (NCPC) and the Commission of Fine Arts. The effects of these constraints on building bulk are best illustrated by the nearby Defense Intelligence Analysis Center (DIAC), an 831,000 square foot facility completed in 1981. This building, which sits on a 48 acre site immediately south of the Navy's Anacostia property, consists of square midrise modules of varying heights arranged carefully to minimize the apparent bulk of the facility when viewed as foreground for Washington's Monumental Core. Its design was shaped and limited by the same regulatory constraints that apply to Navy property at the Anacostia site. The DIAC site development density, when applied to the NAVSEA space requirement, yields a land requirement of 42 acres.

#### **Bellevue Housing Site, Southwest Washington, DC**

Because the Bellevue site is fully utilized for Navy family housing and has no unused area capable of accommodating any large administrative project, it cannot accommodate NAVSEA Headquarters.

The Bellevue Housing site comprises a 60 acre property in Southwest Washington, DC located between Bolling Air Force Base to the north, Naval Research Laboratory to the south and west, and the Overlook Avenue/Interstate 295 corridor to the east. The property is a Navy enlisted family housing complex with attendant support facilities. Until 1994, the Bellevue site was occupied by substandard low density housing units built as temporary units in the 1940's for enlisted personnel assigned to duty in the Washington area. The recent redevelopment of the site demolished the substandard units and replaced them with modern townhouse units to meet current family housing standards. Also included in the redevelopment were some community facilities and recreational open space. The redevelopment of Bellevue has constituted an important addition to the Navy's presence in the Capital area in that it underscores the commitment to improve the quality of life and retention of its enlisted personnel.

There are a number of constraints associated with the redevelopment of the Bellevue site. At the south end of the property is a pre-existing Navy Lodge facility for transient families, an adjacent area for future expansion of the Lodge, and a small site set aside for a future installation restaurant. At the northwest end of the property, the project has located outdoor playing courts, and a community clubhouse. Nearby is a low lying parcel of land which is reserved from development due to the presence of a National Register eligible archeological site. Another low lying area on the west portion of the property has been encumbered by the presence of a storm water retention pond. Further encumbering the site is a B & O Railroad right of way which traverses through the property north to south, and three large sanitary sewer mains, also running north to south, which connect to the District of Columbia's Blue Plains sewage treatment plant located to the south of the Bellevue property. The largest of these mains is a 10.25 by 10.25 foot combined sewer main

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through which flows a large portion of the effluent from the eastern half of the District of Columbia. Yet further encumbering the site is the requirement for an east/west road connection through its center to provide a link between the Naval Research Laboratory's north gate and Overlook Avenue.

The reconfigured family housing at Bellevue responds to all of the above constraints and provides a suitable environment for the resident population. The new street system has been laid out in a series of self-contained "loops", or courts, each serving about 25 townhouse units, and pedestrian and vehicular circulation patterns have been separated to the extent possible within the physical limits of the site.

#### **Arlington Service Center, Arlington, Virginia**

Arlington Service Center is too small to accommodate NAVSEA Headquarters.

Arlington Service Center, approximately 18 acres, is located between South Courthouse Road and Washington Boulevard in Arlington, Virginia. From 1911 to 1956, the property was known as the U.S. Naval Radio Station; in 1960 the Defense Communications Agency (DCA) moved onto the site. The successor organization to DCA is the Defense Information Systems Agency (DISA), whose headquarters comprise the principal current use at the site, occupying about 14 acres at the north end of the base. At the south end of the base (comprising about 4 acres) the available land is utilized as a family housing compound. Here are located the residences for one Navy flag officer and for the senior enlisted personnel of the Navy, Marine Corps and Coast Guard.

Within the DISA-occupied portion of the Arlington Service Center, some untapped development capacity can be realized in the area immediately east of the main building (Building 12). A potential DISA Military Construction project was developed in 1987 to utilize this capacity for an administrative space addition to Building 12. The project, if built, would have provided approximately 122,000 square feet of new space. Aside from this area of the property, the only remaining open area of significant size is the land immediately north of Building 12, which totals about three acres. This portion of the property is required for surface parking to serve DISA employees (172 spaces), is bisected by an Arlington County easement for a large channelized storm drain, and is further constrained by an Arlington County trunk sanitary sewer easement underlying part of the parking lot. This area has minimal, if any, capacity to be developed for any use more intense than the existing surface parking.

#### **Henderson Hall Marine Corps Base, Arlington, Virginia**

Henderson Hall is almost fully built out with permanent, fully utilized Marine Corps facilities. Because of this and its small size, it offers no potential for accommodating NAVSEA Headquarters.

Henderson Hall Marine Corps Base encompasses a 23 acre site in Arlington County, Virginia located within a short distance of Federal Office Building No.2, sometimes referred to as "Navy Annex". The post is surrounded by the Army's Fort Myer to the



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north, Arlington National Cemetery to the east, a low density residential neighborhood and highrise hotel to the south, and Washington Boulevard to the west. The base is the home of Headquarters Battalion, Headquarters Marine Corps, whose mission is to provide support to uniformed Marine Corps personnel in the area.

Henderson Hall was established in 1943 to provide for women Marine reserves assigned to duty at Marine Corps Headquarters. Because of the expediency of the times, all construction at the base consisted of World War II "Tempo" buildings, most of which were still in service until the 1970's. Beginning in 1976, the Marine Corps pursued an aggressive program to redevelop the base with permanent facilities. This program has resulted in a base which today provides an attractive, unified, campus-like setting. The redevelopment has been kept to a low/medium density in keeping with the requirement to avoid undue visual impacts on the adjacent National Cemetery.

A recently acquired land parcel of just over an acre has been added to the north corner of the base, but the land is encumbered by a deteriorating mausoleum. Eventually, when the human remains have been relocated to other sites, the mausoleum will be demolished, providing a small new area of land for personnel support uses.

The west portion of Henderson Hall, adjacent to Washington Boulevard, is an area which has been historically prone to flash flooding. This area drains into Long Branch Creek, a tributary of Four Mile Run, and is used by the base primarily as surface parking for employees. Nevertheless, this portion of the base has some limited development potential if proper design/engineering principles are applied. The National Capital Planning Commission approved master plan for Henderson Hall demonstrates the potential for an administrative building of approximately 100,000 square feet with associated structured parking on the site. If built, such a project would provide only about ten percent of the building area required to accommodate the NAVSEA Headquarters requirement.

#### **Federal Office Building No. 2, Arlington, Virginia**

Although traditionally occupied by Navy and Marine Corps offices and often referred to as "Navy Annex", Federal Office Building No. 2 (FOB2) is owned by the Office of the Secretary of Defense (OSD) as part of the Pentagon Reservation. OSD does not intend to retain the building long term, that is, past the time required to complete the ongoing Pentagon renovation project. Thus, FOB2 is not available to DoN for long term occupancy. Additionally, the building cannot be vacated of its current occupants, appropriately renovated, and re-occupied within the BRAC mandated timeline. For these reasons, FOB2 is infeasible as a receiver site for NAVSEA Headquarters.

FOB 2 is located on a hillside adjacent to Arlington National Cemetery, which lies to its north. It was built in 1941 in ten months. It was first designed as a warehouse, but then converted to offices to support the nation's war effort. The original concrete framed building had a head house and seven wings, and was three floors high. Later in 1948, a wood framed fourth floor was added to the original seven wings and headhouse, and a three story eighth wing was added.

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FOB 2 contains approximately 1,022,000 square feet of gross floor area. Currently it is occupied by Department of the Navy tenants, including portions of Headquarters Marine Corps and the Bureau of Naval Personnel (BUPERS).

The 1993 Base Closure and Realignment Commission realigned BUPERS to the Naval Air Station, Memphis, Tennessee. In 1994, the Department of the Navy evaluated FOB2 to determine whether it constituted a potentially feasible alternative to accommodate NAVSEA Headquarters. It did not. In addition to its impermanence, there were other problems.

NAVSEA space requirements are so large that it would require the entire FOB 2 facility. Due to the realignment of BUPERS to Memphis, over half the space in FOB2 will become available prior to July 1999, at which time renovations could possibly begin for the purpose of accommodating a backfill occupant. However, the remainder of the facility remains occupied by Headquarters Marine Corps (HQMC), which will retain its presence in FOB2 until the Pentagon renovation project is well advanced. Continuing delays in the ongoing Pentagon renovation program made it impossible to accomplish HQMC relocation from FOB 2 and the necessary follow-up building renovations for a new occupant within the six year timeframe mandated by the Base Closure and Realignment Act of 1990. Studies done by the Navy in 1994 also revealed that a substantial capital investment would be required to prepare FOB2 for re-occupancy by NAVSEA or other Navy commands. Because of its high renovation costs and impermanence, FOB 2 was considered to be an unsuitable site for major Navy capital investment.

Based on these considerations, FOB 2 was not included in DoN plans for administrative space in the Washington metropolitan area. This was noted in the 1995 Base Closure and Realignment Commission Report, page 1-77, (in the summary of the Secretary of Defense justification) which states: "the capacity of the White Oak facility in Silver Spring, Maryland, or at the Navy Annex, Arlington, Virginia is no longer required to meet DON administrative space needs."

#### **Other Potential Sites**

##### **Regarding other potential sites for NAVSEA Headquarters:**

To determine whether other DoD-owned property in the metropolitan area would be available for potential use by the Navy for NAVSEA Headquarters, Navy contacted the Army and the Air Force. For Army sites, the U.S. Army Military District of Washington has stated by letter that: 1) No buildings are available which could accommodate NAVSEA; and 2) Although the Army does have land at Forts Meade and Belvoir, it is unwilling to make the land available for non-Army use. To explain the latter position, the Army cites its own plans to reduce its leased space holdings in the National Capital Region, which are anticipated to generate a major influx of personnel onto the two named installations. The Air Force has two installations in the Washington metropolitan area: Bolling Air Force Base and Andrews Air Force Base. Both installations have stated by letter that they cannot accommodate NAVSEA Headquarters.

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With regard to the Southeast Federal Center and other properties owned by the General Services Administration (GSA):

1. The Southeast Federal Center (SEFC) is a GSA-owned property immediately west of, and contiguous to, the Washington Navy Yard. Although the SEFC is master planned for federal offices, and thus has the capacity to accommodate a large headquarters function, GSA has developed and presented its own plans to accommodate other federal requirements at the site and does not support its development as an extension of the Washington Navy Yard. Moreover, the capacity of the existing Navy Yard property to accommodate a command the size of NAVSEA Headquarters is well known to GSA and the National Capital Planning Commission (NCPC), since the master plans for both the Washington Navy Yard and the SEFC sites were coordinated closely during their development and subsequent presentation to NCPC. Given that the Navy has previously demonstrated that its needs can be met utilizing the existing Navy-owned land, and that its capacity to do this was demonstrated in a base master plan approved by the National Capital Planning Commission in 1991, the Navy has no basis for seeking GSA-owned land at the Southeast Federal Center for the purpose of accommodating NAVSEA Headquarters.

2. For the metropolitan area as a whole, the Department of the Navy currently owns sufficient real estate to accomplish its mission. With the closure of NSWC White Oak, and the realignment of various commands now in leased space in the metropolitan area onto bases, DoN will have very little excess capacity at any site in the region. This situation, when attained, will meet the primary BRAC goal of divestiture of unneeded DoD infrastructure. Because DoN will retain sufficient land to meet its needs in the region, and because acquisition of new real property from GSA would run counter to the intent of the BRAC goal to reduce infrastructure, it is inappropriate for Navy to seek GSA land in the Washington, DC metropolitan area to provide a site for NAVSEA Headquarters.

### **1.1 Naval Sea Systems Command Headquarters Mission and Organization**

The NAVSEA mission is to transform military requirements into capable ships, systems, and ordnance which enable our Sailors and Marines to fight and win. It is engaged in the administration of acquisition and development of contracts/programs for military hardware and weapons systems.

### **1.2 Purpose of and Need for Action**

The purpose of the proposed action is to implement the 1995 BRAC relocation of 4,100 NAVSEA personnel to the Washington Navy Yard (WNY). Approximately 1,000,000 square feet of office space, parking for about 2,000 vehicles, and other infrastructure and services will be needed at the WNY to provide the necessary facility and operational requirements generated by the NAVSEA relocation.

### **1.3 Scoping and Public Involvement**

The Environmental Impact Statement (EIS) process is designed to involve the public in Federal decision-making. Public involvement/intergovernmental coordination and consultation are recognized as an essential element in the development of an EIS. Formal notification and

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opportunities for the public participation, as well as informal coordination with government agencies and planners have and will continue to occur throughout the EIS process.

To initiate the process, a Notice of Intent (NOI) to prepare the EIS was published in the *Federal Register* on May 1, 1996 and a public notice was published in the Sunday edition of both the *Washington Post* and the *Washington Times* newspapers on April 28, 1996. In addition, a scoping letter was sent to public agencies, organizations and individuals with a special expertise or interest in the proposed action. The notice provided general information on the proposed action and alternatives, identified issues to be examined in the Draft EIS, scheduled a public scoping meeting, advised of the need to coordinate information, and encouraged their involvement in the EIS process. A scoping meeting was held on May 18, 1996 at Hine Junior High School in the District of Columbia. Comments received through the scoping process were addressed in the Draft EIS.

Throughout the preparation of the Draft EIS, an effort was made to locate, inform, and seek input from interested individuals and organized groups. All individuals, organizations, and government agencies identified on the EIS distribution list (Section 8.0) received copies of the Draft EIS, official notices, and the Final EIS. Any individual, organization, or government agency wishing to be added to the distribution list or requesting to review supporting EIS documentation, should contact the Navy representative listed on the cover sheet of this document.

A notice of availability (NOA) of the Draft EIS was published in the *Federal Register* on December 27, 1996 and copies were sent to organizations and persons on the distribution list, including local libraries. A NOA of the document was also published in the *Washington Post* and *Washington Times* newspapers on December 29, 1996. The publishing of the NOA in the *Federal Register* marked the beginning of a 45 day public review period of the Draft EIS which ended on February 10, 1997. Copies of the Draft EIS were issued to requesters during the review period and these individuals were added to the distribution list (Section 8). On the evening of January 23, 1997, the Navy held a Public Hearing at the WNY to receive public comments on the Draft EIS. The Public Hearing was attended by approximately 120 individuals including representatives from a variety of community groups, environmental organizations, Federal and local government, and the media. The Navy received oral comments from 20 individuals during the Public Hearing. An official transcript of the Public Hearing is included in Appendix C of this document. Comments received at the Public Hearing and throughout the public review period are addressed in the Final EIS (see Appendix C).

2.0 DESCRIPTION OF THE  
PROPOSED ACTION  
AND ALTERNATIVES

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## **2.0 Description of the Proposed Action and Alternatives**

### **2.1 Proposed Action**

The proposed action is to provide the facilities and operational requirements necessary to accommodate NAVSEA personnel at the WNY. This would include up to 1,000,000 square feet of administrative office space, parking for approximately 2,000 vehicles (includes both employee and visitor parking), and other project components, infrastructure, and services necessary to support the functional operation of the relocated activities. These components are needed to implement the BRAC 95 mandated relocation of the NAVSEA to the WNY.

The 1990 DBCRA specifies that the National Environmental Policy Act (NEPA) does not apply to the actions of the President or the Commission. It also exempts the Secretary of Defense and military departments from considering: "(i) the need for closing or realigning the military installation which has been recommended for closure or realignment by the Commission; (ii) the need for transferring functions to any military installation which has been selected as the receiving installation; or (iii) military installations alternative to those recommended or selected." The DBCRA further stipulates that NEPA shall apply to U.S. Department of Defense (DoD) relocation actions "...after the receiving installation has been selected but before the functions are relocated." Therefore, this EIS will not address these issues, but instead, analyze the impacts associated with the projects/alternatives identified at the WNY needed to implement the NAVSEA relocation.

### **2.2 Identification of Alternatives**

The WNY is an extensively developed facility located in southeast Washington DC, along the banks of the Anacostia River (see Figure 2-1). Operations at the installation have changed throughout its history from a shipyard and weapons manufacturing center to the current-day administrative facility. Although these past uses have earned the WNY status as a National Historic Landmark District, several large open-bay manufacturing buildings have been converted into office space to facilitate the previous operational changes. These conversions have typically occurred within the eastern and central portions of the WNY. The majority of existing office space at the WNY is currently occupied, and little, if any, vacant land within the installation is available for new building sites. These factors, as well as the guidelines provided in the Base Master Plan, were used in the development of four alternatives to accommodate the BRAC relocation of NAVSEA personnel to the WNY.

All four alternatives focus on a similar group of structures and would include varying degrees of renovation, demolition, and/or new construction. Structures affected by the proposed action are grouped within the western area of the Installation and include Buildings: 28, 73, 104, 116, 142, 143, 176, 197, 198, and 201. Common to all alternatives are: minor modifications to on-base roadways, traffic controls and pedestrian conveyances to improve vehicle routing, traffic flow and emergency access; installation of chiller plant system components in and around Building 116, with distribution lines running to affected buildings; minor modifications of the base heat plant steam distribution systems to adequately supply heat to new and/or renovated structures associated with the action; installation and/or upgrade of utility service lines and components associated with project buildings; the partial demolition and/or modification of the coal storage pit/heating oil tank containment reservoir, Structure 273, to accommodate additional

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heating/cooling system components and enhance site aesthetics and access; conversion of waterfront parking, south of Building 197, to vegetated park-like setting; minor landscaping in and around affected buildings; development and implementation of an erosion and sediment control plan; and an increase of approximately 4,100 personnel relocating to the WNY. **In addition, all four alternatives would include remediation of contamination directly associated with the various project components.**

Another action common to all alternatives would be the implementation of a stormwater management plan for the project area. Although implementation of the alternatives is not expected to increase the amount of impervious surface at the installation, runoff from precipitation events will be treated in accordance with a stormwater management plan. The stormwater management plan will be developed in coordination with local regulators. It is anticipated that treatment of surface runoff will be necessary prior to release into existing outfalls.

## **2.3 Viable Alternatives**

This section describes the four alternatives identified to accommodate the relocation of the NAVSEA Headquarters to the WNY. **A comparison of the current and proposed use of building under each of alternatives is provided in Table 2-1.**

### **2.3.1 Alternative 1**

Alternative 1, which is the Navy's preferred alternative, includes adaptive reuse, demolition, and new construction involving Buildings 28, 104, 142, 143, 176, 197, 198, and 201 (see Figure 2-3). Buildings 28 and 143 would be demolished and an eight-level, 1,500-space parking garage constructed in their place. Buildings 142, 198, and 201 would also be demolished and a new four-story office building constructed on the site. Buildings 104 and 176 would be renovated to provide additional office space. Five floors of office space would be incorporated into the interior of Building 197 and a four story office structure added onto the east side of the building.

### **2.3.2 Alternative 2**

This alternative would involve adaptive reuse of Buildings 28, 104, 143, 176, 197, and 201, and the construction of a new 12-level parking garage east of Building 197 (see Figure 2-4). This alternative would rely heavily on adaptive reuse of existing structures with very little demolition. The parking garage would be the only new structure constructed under this alternative.

### **2.3.3 Alternative 3**

Alternative 3 includes demolition of a large block of buildings including 28, 142, 143, 176, 198, and 201, and the construction of a new five-story office building in their place. Buildings 73 and 104 would be renovated to provide additional office space, and Building 197 would be converted



Table 2-1: Comparison Of Current Building Uses and Proposed Alternatives

Building	Current Use	Alternative 1	Alternative 2	Alternative 3	Alternative 4
28	Offices, shipping & receiving	demolish	renovate	demolish	demolish
73	Indoor tennis courts	no change	no change	renovate	no change
104	Offices, storage, service garage	renovate	renovate	renovate	no change
142	Offices, sheet metal shop	demolish	no change	demolish	demolish
143	Offices, publishing, and printing	demolish	renovate	demolish	demolish
176	General offices, shipping and receiving	renovate	renovate	demolish	demolish
197	Vacant building	renovate	renovate	renovate	renovate
197E	Vacant asphalt lot	new building	new building	no change	new building
198	USO offices, general offices	demolish	no change	demolish	demolish
201	Maintenance shop, offices, storage	demolish	renovate	demolish	demolish
Impervious Surface south of Bldg. 197	Asphalt covered area	replace with vegetative cover	replace with vegetative cover	replace with vegetative cover	replace with vegetative cover



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into a seven level parking garage (see Figure 2-5). This proposal utilizes occupied building sites, alleviating the need for siting new project components.

#### **2.3.4 Alternative 4**

Alternative 4 would include the demolition of Buildings 28, 142, 143, 176, 198, and 201, and the construction of a large six-level building on the site (see Figure 2-6). Building 197 would be renovated and a six-story addition constructed along its east side. The overall design for this alternative is the creation of two large structures which incorporate four stories of office space above two levels of parking.

#### **2.4 No Action Alternative**

The No Action Alternative would be to continue NAVSEA operations at their present location in Arlington, Virginia. **Public Law 101-510, Section 2904 (a) (4) requires that BRAC realignment actions be completed no later than six years after the date on which the President transmitted that applicable Base Realignment and Closure Commission's Report to Congress. The date of the BRAC 1995 report was September 28, 1995, therefore the NAVSEA relocation from leased space in Arlington County Virginia must be completed no later than midnight September 28, 2001. The No Action Alternative is not viable and will not be analyzed in this EIS.**

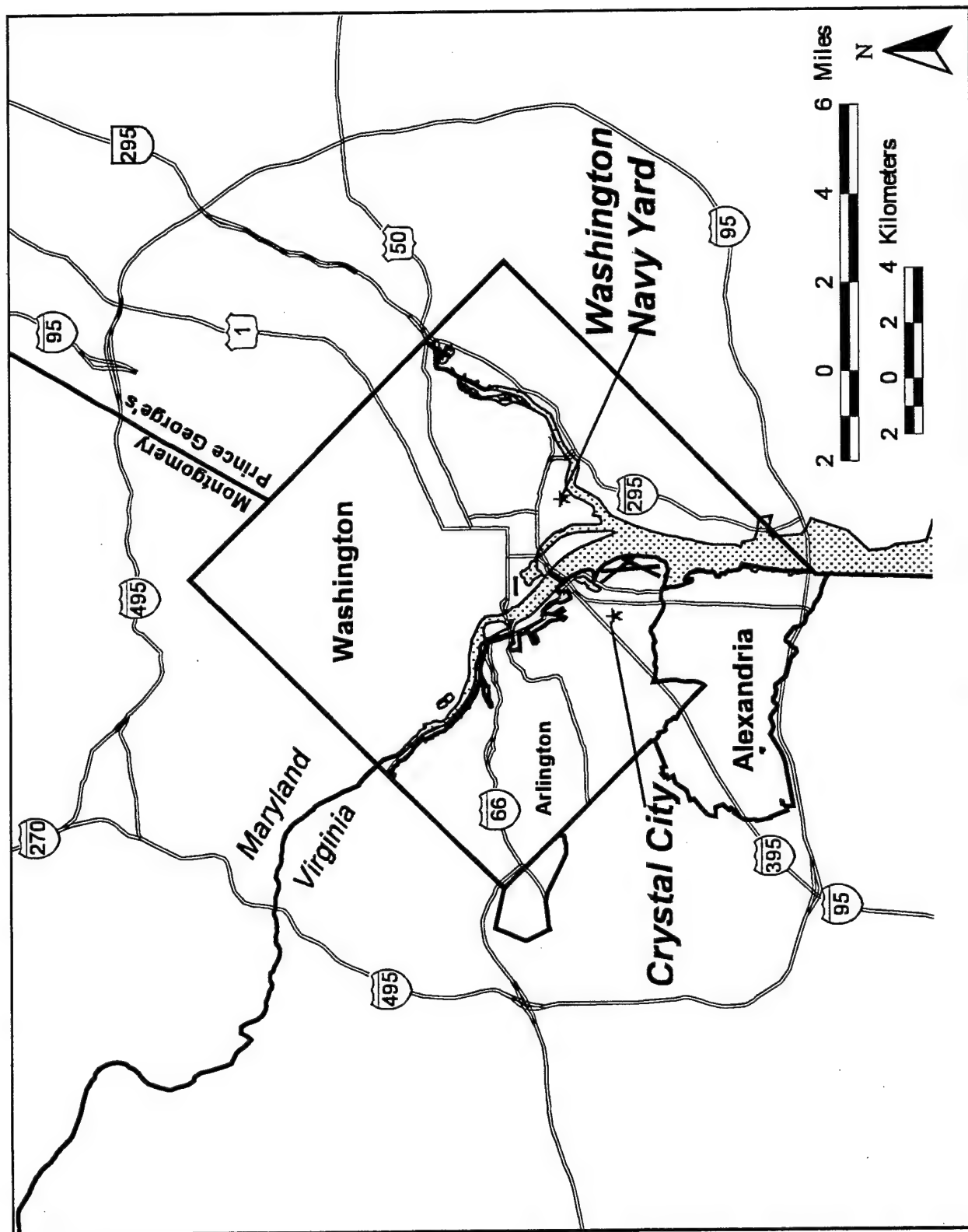


Figure 2-1, Regional Map

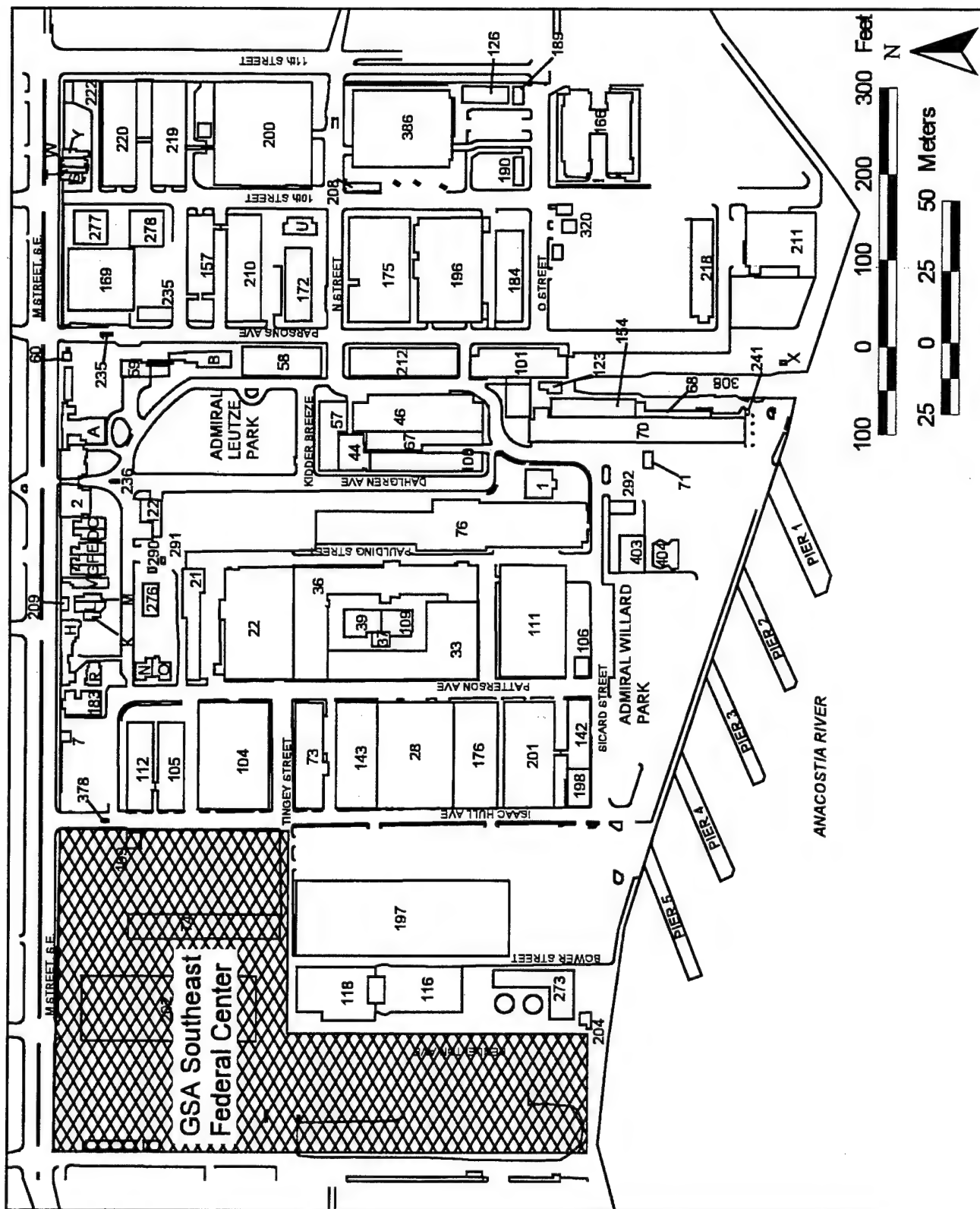


Figure 2-2: Washington Navy Yard Base Map

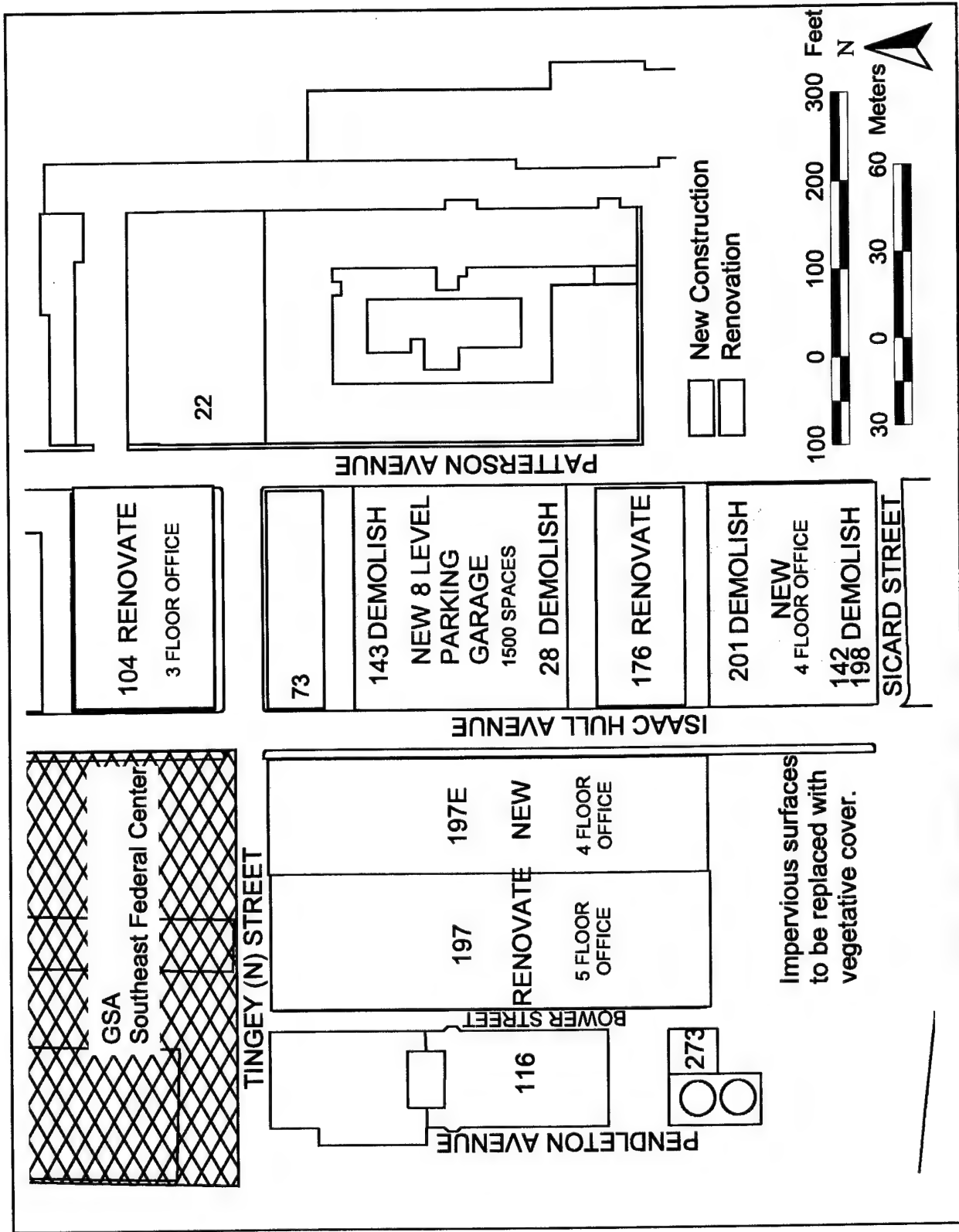


Figure 2-3, Alternative 1

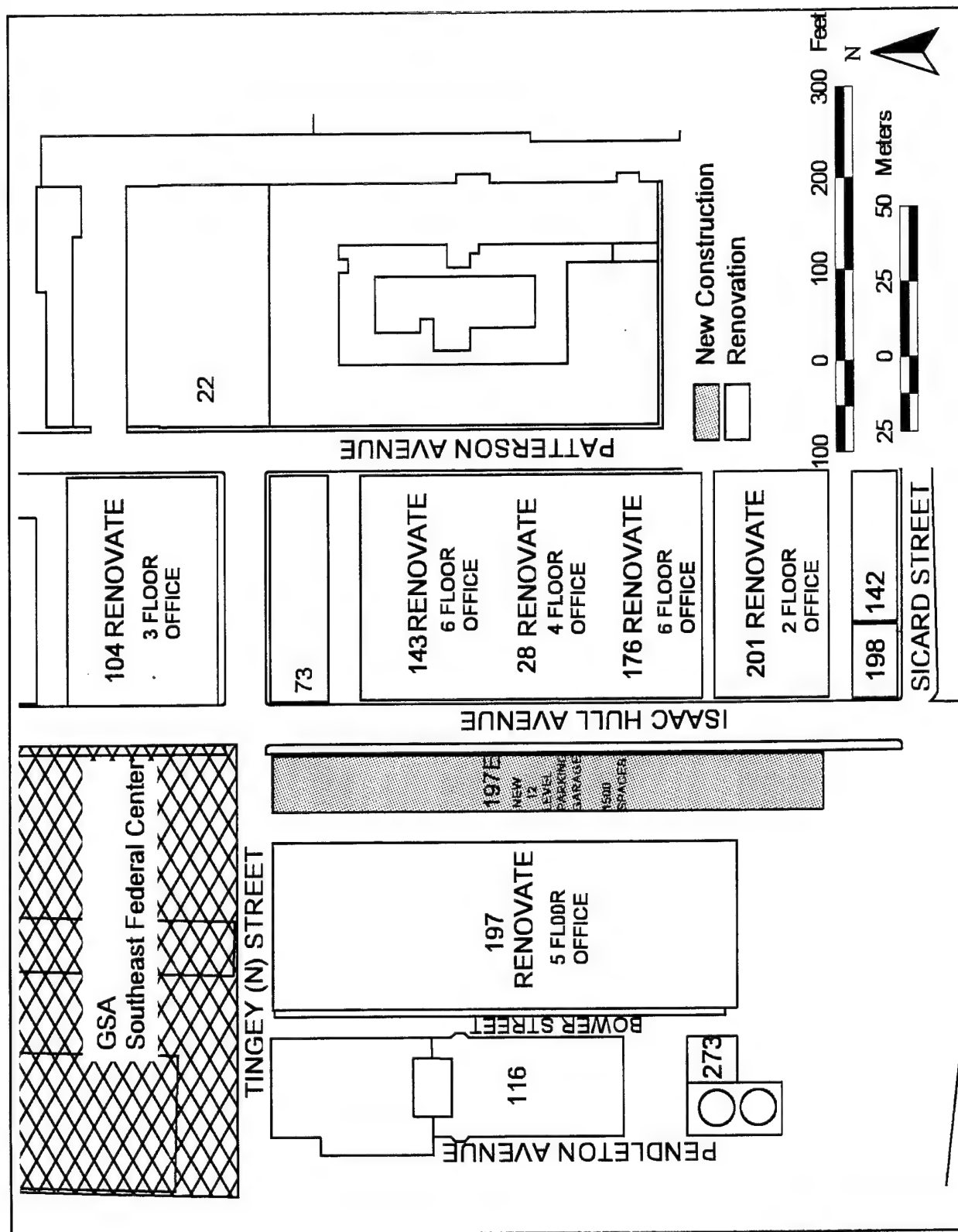


Figure 2-4, Alternative 2

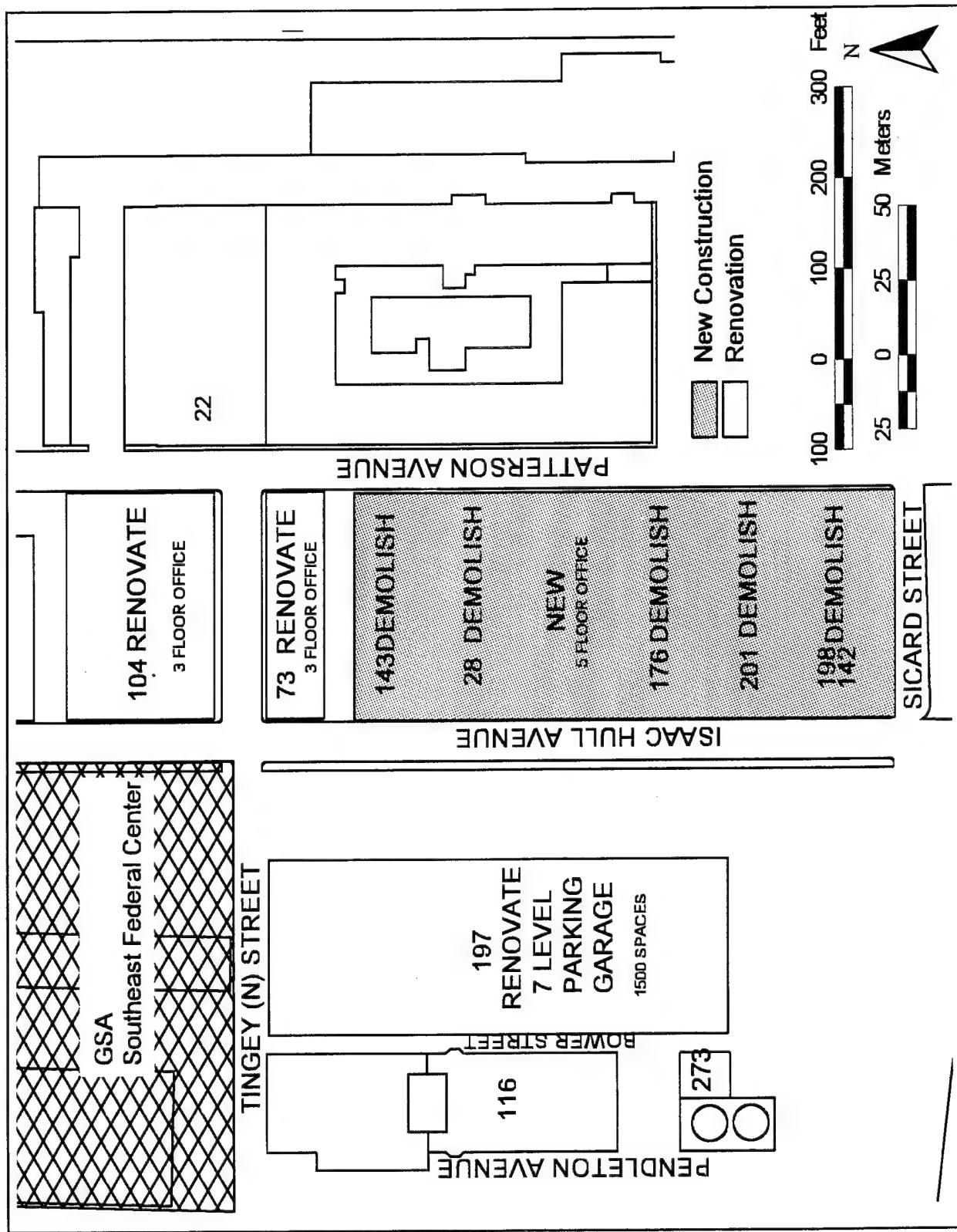


Figure 2-5, Alternative 3

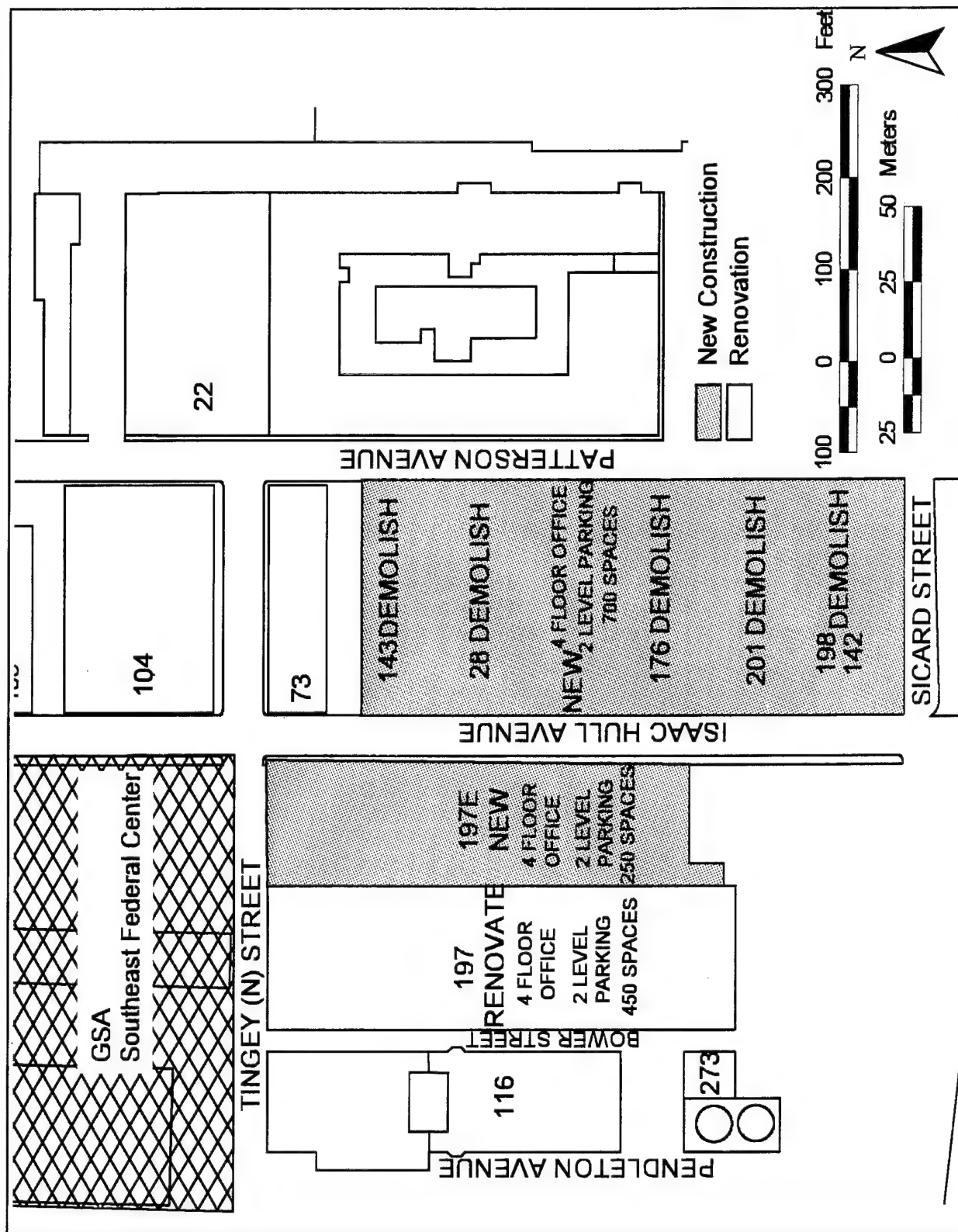


Figure 2-6, Alternative 4



## 3.0 AFFECTED ENVIRONMENT

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### **3.0 Affected Environment**

This section of the EIS presents relevant resource components of the existing environment that have the potential to be affected by the proposed action and alternatives or that would affect the proposed action and alternatives. It also serves as a basis for assessing environmental consequences of the proposed action and alternatives present in Section 4.0.

The WNY is located in southeast Washington, DC on the banks of the Anacostia River. The land area of the base has been increased by filling and extending areas of the shoreline. Various types of structures have been built throughout the installation, in response to mission requirements and facility support. This build-up reflects changing uses at the installation, from early shipbuilding and manufacturing to an administrative facility, and resulted in extensive development of the property. Construction on-base has displaced most of the natural vegetation; what remains are small islands of turf and ornamental shrubs. The largest vegetated area is Admiral Leutze Park, which is used for Naval ceremonies. Small yards surround base quarters, and patches of grass, shrubs, and individual trees can be found along roadways, sidewalks, and some buildings.

#### **3.1 Physical Environment**

This section describes the environmental resources potentially affected by the proposed action. These resources include: topography, geology, and soils; water resources; floodplains; vegetation and wildlife; air quality; noise; infrastructure and utilities; and transportation.

##### **3.1.1 Topography, Geology, and Soils**

The topography of the WNY is relatively flat, sloping gently southwest toward the Anacostia River. Slopes vary from less than one percent in the western portion of the installation to five percent in the eastern portion of the installation. The project site is between 10 and 15 feet in elevation.

The WNY lies within the Coastal Plain geological province, which is characterized by underlying sedimentary deposits 300-350 feet thick. The texture of these sediments ranges from clays to coarse gravel and boulders that rest on older bedrock. Two formations from the Quaternary period—the Wicomico formation and the Pamlico formation—are present. The older of the two is the Wicomico, which comprises the higher terrace elevations at the north and northeast edges of the installation. This formation has a coarse gravel bed at its base and finer sand and silt toward its edges. The Pamlico formation is found throughout the remainder of the installation and is entirely fluvial and estuarine. The composition is mostly gravel, silt, and sand, which presents more recent terrace deposits. This formation also encompasses recent natural alluvial stream deposits, tidal marsh areas, and natural and artificial fill areas of the WNY.

As a developed urban environment, much of the WNY's land surface has been disturbed by grading and filling for construction. Soils of the site include Christiana-Urban land complex, Udorthents, and Urban land (see Figure 3-1).

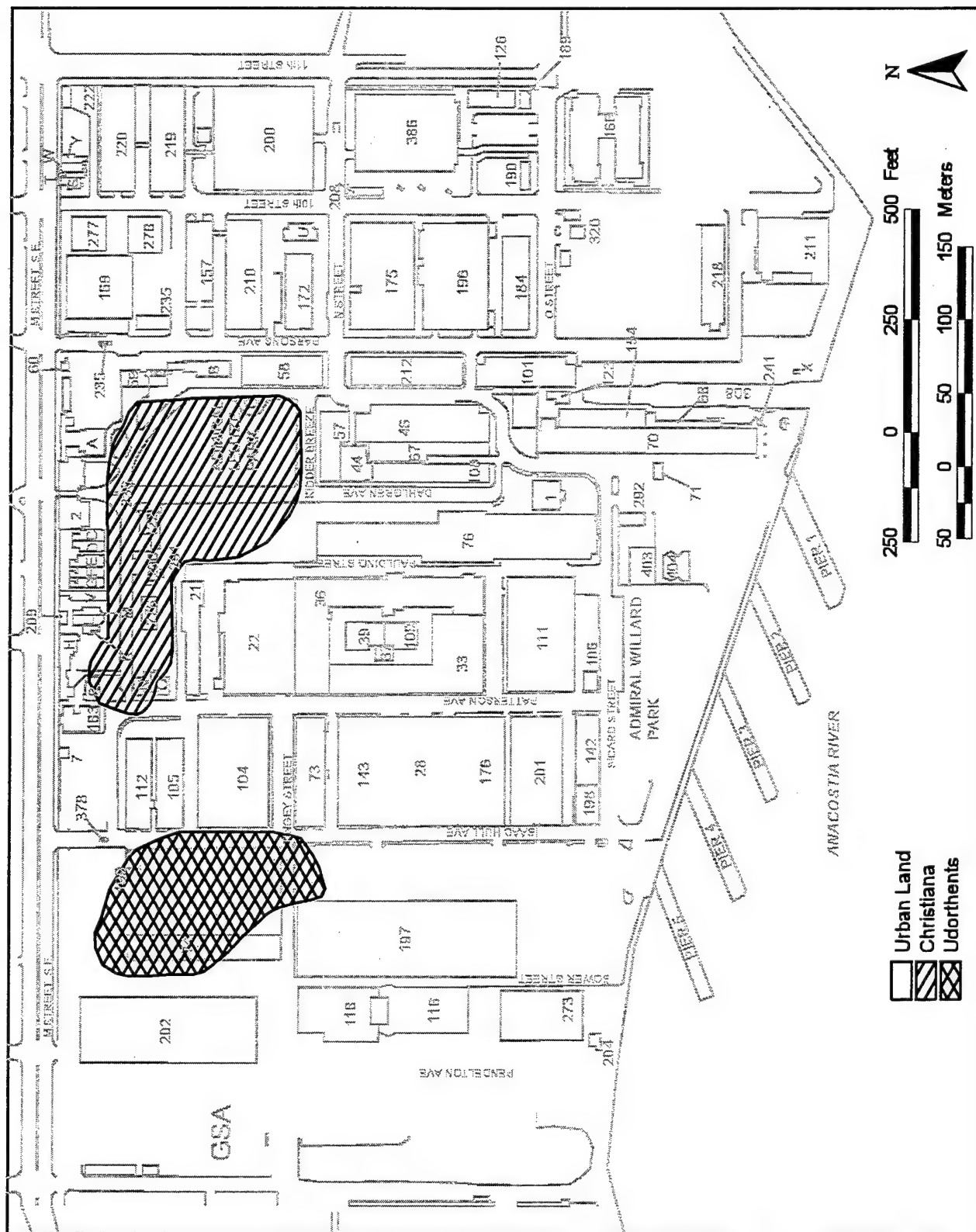


Figure 3-1: Soil Types at the WNY

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Christiana-Urban land consists of nearly level to gently sloping, well-drained soils occurring at higher elevations within urbanized areas of the Coastal Plain. Permeability is moderately slow to slow in undisturbed areas of the soil and has variable permeability in areas disturbed by cuts, fills, or urban land. Runoff potential of this soil type is medium to rapid with severe erosion potential. Due to instability this complex is, especially in disturbed or graded areas, severely limited for most building purposes without specific engineering design to compensate for these limitations. Christiana-Urban land complex occurs in the north-central portion of the WNY.

Udorthents consists of approximately 80 percent miscellaneous earthy fill with the remaining percentage of non-soil fill materials such as brick, trash, concrete pieces, industrial wastes, and stone remnants. Such heterogeneous materials have been placed on poorly drained to somewhat excessively drained soils on uplands, terraces, and floodplains to provide building sites and other areas at the WNY. Permeability, runoff, and internal drainage are quite variable in this unit. Most areas of this unit are subject to subsidence and, therefore, have poor potential for use as building sites. A detailed on-site investigation is necessary to determine the potentials and limitations of these areas for any proposed use. This unit occurs in the vicinity of the 7th Street entrance south of M Street.

The majority of the WNY (approximately 90 percent) consists of Urban land. Urban land consists of areas with more than 80 percent of the surface covered by asphalt, concrete, buildings, or other impervious surfaces. This soil category may contain large areas of miscellaneous artificial fill where several feet of fill material has been placed over intermittent streams, swamps, floodplains, and tidal marshes. Permeability for Urban land is typically slow, while the runoff potential is generally rapid. Careful on-site investigations are needed to determine the potential and limitations of these areas for any proposed use. This unit occurs throughout the majority of the WNY.

### 3.1.2 Water Resources

The WNY is located along the tidal portion of the Anacostia River, upstream of its confluence with the Potomac River. No surface streams or jurisdictional wetlands are present on the installation. Much of the surface area is occupied by buildings, roadways, or parking areas. Surface runoff directed into the stormwater inlets at the WNY is routed through a series of underground drainage pipes, and conveyed to several outfalls along the Anacostia River (see Section 3.1.7.6 for additional information).

The Anacostia River has some of the poorest water quality in the Chesapeake Bay water system, as reported by the Interstate Commission on the Potomac River Basin (ICPRB). Upstream from the WNY, the Anacostia suffers from heavy sedimentation and stream bank erosion. **According to a 1994 Water Quality Report prepared for the Metropolitan Washington Council of Governments (MWCOG), combined sewer overflows (CSO) discharges within the District of Columbia are the primary point source pollution problem affecting the water quality of the Anacostia River.** MWCOG describes this source of pollution as incidental discharges of the sanitary sewer flows that normally go to the Blue Plains Sewage Treatment Plant, combined with stormwater flows that occur when the capacity of the sewer system is exceeded during rainfall events. Eleven CSO outfalls exist within the tidal Anacostia with discharge points between RFK Stadium and the South Capitol Street Bridge (MWCOG, 1994). Water quality throughout the Anacostia River watershed is also affected by pollution related to non-point stormwater runoff.

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The sediments in the tidal portion of the Anacostia River are a repository for many of the pollutants that may have been previously discharged into the river from a variety of upstream sources (U.S. Department of the Navy, Engineering Field Activity Chesapeake Naval Facilities Engineering Command, November 1993).

This combination of adverse conditions causes severe dissolved oxygen depletion, which results in frequent fish kills and near elimination of game fish species. Contact recreation (e.g., swimming or other play and leisure-time activities where individuals may come in direct contact with the surface water) is restricted because of frequent exceedences of public health standards for coliform bacteria and discharged sewage debris (U.S. Department of the Navy, Chesapeake Division, Naval Facilities Engineering Command, October 1990).

Various efforts and projects to improve the water quality of the Anacostia River are supported by numerous organizations and government agencies including: District of Columbia Department of Consumer and Regulatory Affairs; U.S. Environmental Protection Agency; U.S. Department of Interior, National Park Service; U.S. Army Corps of Engineers; U.S. Department of the Navy; MWCOG, Anacostia Watershed Restoration Committee; ICPRB; Anacostia Watershed Society; and the African American Environmental Association (AAEA).

The groundwater elevation along M Street S.E. varies from about minus three feet National Geodetic Vertical Datum (NGVD) of 1929 to a little over one foot NGVD. The NGVD is a fixed reference point adopted as a standard for determining elevations in the U.S. and Canada. The NGVD reference point represents a best fit over a broad geographic area, and is not consistent with sea levels, which vary over time and by place. In general, the movement of groundwater is to the south and southeast toward the Anacostia River; however, the groundwater has been lowered and natural flow disturbed near the northwest corner of the WNY where excavation and dewatering for the Navy Yard Metro station has occurred. Occasionally, the Anacostia River floods and the movement of subsurface water at the WNY may reverse, flowing south to north (Baker Environmental, 1993).

The shallow aquifer is not used as a drinking water source, nor does it supply water for any other use (such as industrial or agricultural) within a four mile radius of the WNY.

### **3.1.3 Floodplains**

Executive Order 11988, Floodplain Management, directs Federal agencies to determine whether a proposed Federal action would occur in a floodplain based upon Flood Insurance Rate Maps (FIRM) or best available information. If the action is to be located in a floodplain, the Executive Order requires that the agency consider alternatives to avoid adverse effects and incompatible development in the floodplain, and, if not feasible, construct facilities in accordance with the standards and criteria of the National Flood Insurance Program (44 CFR 59 et seq.) to minimize potential harm to or within the floodplain.

The FIRM shows that portions of the WNY, as well as portions of the District and the adjacent Southeast Federal Center, are located within a designated flood zone (see Figure 3-2). Flood Zone A, the 100-year flood area, occurs along the Anacostia River shoreline within the WNY and adjacent properties. A majority of the project site would be located within the 100-year flood zone. The flood level of Zone A in the vicinity of the project site is identified at an

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elevation of 11 feet, which is referenced to the NGVD. The elevation of the project site ranges between 10 and 15 feet. Zone B, which identifies the area between the 100- and 500-year flood level, extends beyond Zone A and the WNY boundaries. Zone C, an area of minimal flooding, extends throughout the Washington, DC area.

Early development of the WNY involved the addition of fill material to the original Anacostia River shoreline and associated floodplain. A timber seawall, built in the early 1900s, and a series of five piers currently define the Anacostia River shoreline along the WNY. Various structures have been built at the installation since that time, forming an impervious surface over most of the WNY. This development affected the character and function of the floodplain in this area.

#### **3.1.4 Vegetation and Wildlife**

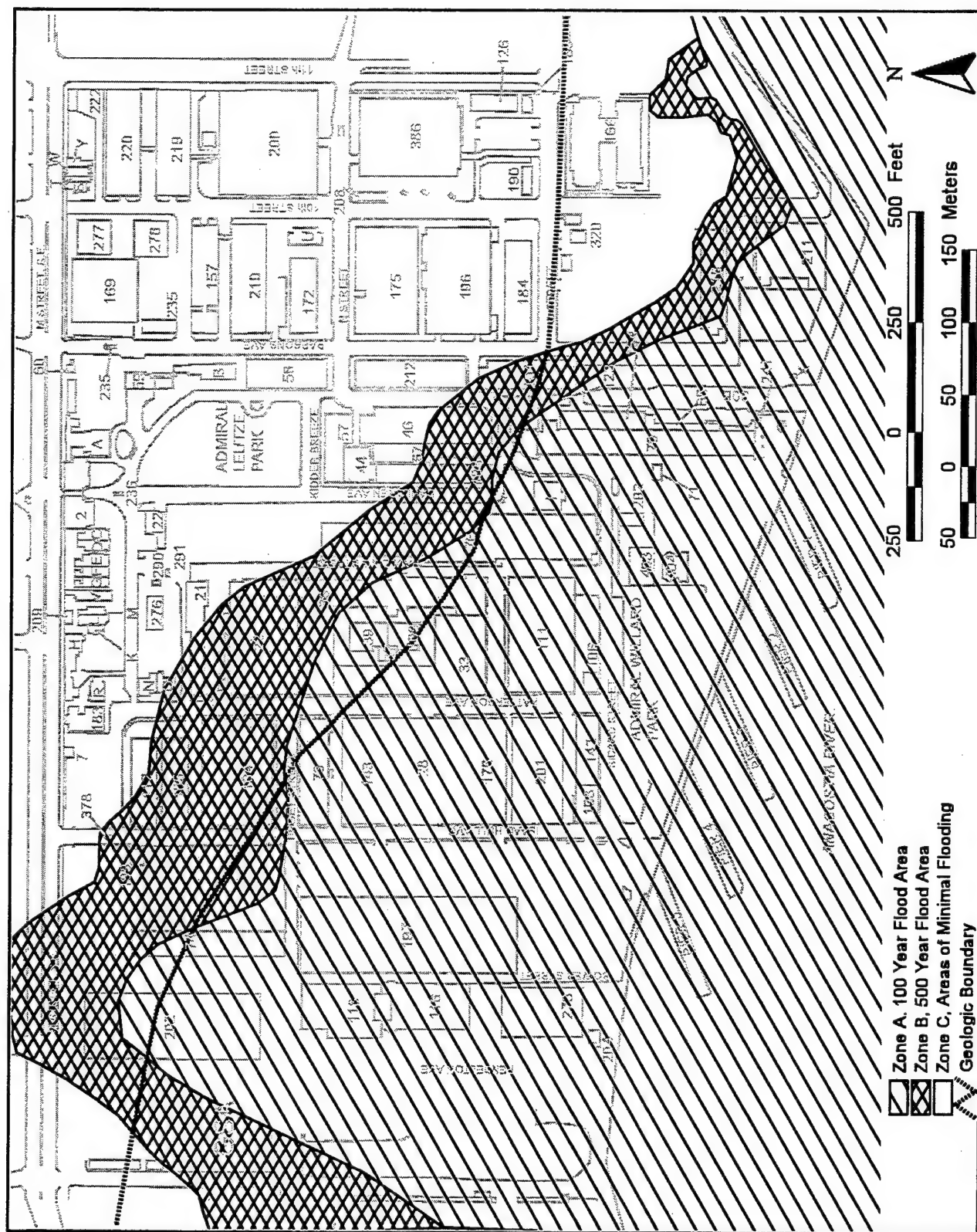
The WNY is a heavily developed site located in a metropolitan area. This development eliminated most of the natural vegetation and wildlife at the installation. The remaining vegetation consists of small patches of mowed turf and a mixture of ornamental and native flowers, shrubs, and trees. The largest of these areas are the two parks at the WNY, Leutze Park and Willard Park. These two parks are planted with trees and shrubs and have maintained grass areas that serve as the only vegetated open space areas within WNY. Leutze Park is approximately 1.7 acres, while Willard Park is approximately one acre in size. Entrances and streetscapes at the installation, as well as the areas around on-base residences and some buildings, are planted with trees, shrubs, and flowering annuals. Otherwise, the WNY is completely developed with buildings, paving, and sidewalks. No Federally listed threatened or endangered plant species are known to occur on the installation.

Wildlife species found on the installation include those typically associated with an urban environment such as squirrels, opossums, raccoons, feral cats, rabbits, various rodents, gulls, pigeons, starlings, and sparrows. Although no Federally listed threatened or endangered wildlife species are known to exist on base, protected birds of prey may occasionally fly through the area.

#### **3.1.5 Air Quality**

The U.S. Environmental Protection Agency (EPA) defines ambient air in 40 Code of Federal Regulations (CFR) Part 50 as "that portion of the atmosphere, external to buildings, to which the general public has access." In compliance with the 1970 Clean Air Act (CAA) and the 1977 and 1990 Clean Air Act Amendments (CAAA), the EPA has promulgated ambient air quality standards and regulations. The National Ambient Air Quality Standards (NAAQS) were enacted for the protection of the public health and welfare, allowing for an adequate margin of safety. To date, the EPA has issued NAAQS for six criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particles with a diameter less than or equal to a nominal 10 micrometers (PM<sub>10</sub>), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), and lead (Pb). Areas that do not meet NAAQS are called nonattainment areas.





**Figure 3-2: Flood Zones at the WNY**



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There are two types of air quality standards: primary and secondary. Primary standards are designed to protect sensitive segments of the population from adverse health effects, with an adequate margin of safety, which may result from exposure to criteria pollutants. Secondary standards are designed to protect human health and welfare and, therefore, in some cases, are more stringent than the primary standards. Human welfare is considered to include both the natural and manmade environments. Health and welfare effects of criteria pollutants applicable to Washington, DC are listed in Appendix A.

Under the CAA and CAAA, state and local air pollution control agencies have the authority to adopt and enforce ambient air quality standards (AAQS) more stringent than the NAAQS. Washington, DC has adopted all of the NAAQS.

**On July 18, 1997 the EPA promulgated new NAAQS for ozone and particulate matter. These new standards are effective September 16, 1997. A new eight-hour ozone standard of 0.08 parts per million (ppm) replaces the previous one-hour standard of 0.12 ppm. The new PM<sub>2.5</sub> standards, 15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) annual and 65  $\mu\text{g}/\text{m}^3$  24-hour, supplement the existing PM<sub>10</sub> standards of 50  $\mu\text{g}/\text{m}^3$  and 150  $\mu\text{g}/\text{m}^3$  respectively. States are to submit, for EPA approval, revisions to the SIPs that provide for attainment and maintenance of the new standards through control programs directed to sources of the pollutants involved. This federal action will adhere to all new revisions of the SIPs as they pertain to its implementation and operation.**

The EPA initially classified ambient air quality in the Washington, DC area, **which includes parts of Virginia and Maryland**, as in non-attainment for two criteria pollutants, O<sub>3</sub> and CO. Both the current location and the receiver site for NAVSEA are within the same non-attainment areas. Based on the levels of NAAQS exceedance, an attainment date of November 15, 1999 was set for O<sub>3</sub> and December 31, 1995 for CO. Air quality in the Washington, DC area is monitored by a network of stations meeting the EPA's design criteria for State and Local Air Monitoring Stations. Data collected in 1994 showed a high one-hour concentration of 8.2 parts per million (ppm) and an eight-hour high of 6.3 ppm for CO concentrations. Both readings were well below the NAAQS for CO of 35 ppm and 9 ppm, respectively. The highest one-hour reading for O<sub>3</sub> was 0.137 ppm, which exceeded the one-hour NAAQS of 0.12 ppm. As a result, the EPA issued a reclassification of CO from a non-attainment to a maintenance status (Federal Register, Jan. 1996, Vol. 61, No. 20, pg. 2931).

Each state and locality has the primary responsibility for air pollution prevention and control. The CAA requires that each state submit a State Implementation Plan (SIP), which describes how the state would attain and maintain NAAQS in nonattainment areas. Washington, DC developed a SIP, which was approved by the EPA. **To ensure that Federal actions do not interfere with a state's ability to timely attain the NAAQS, the CAA requires that Federal agencies demonstrate that their actions in non-attainment and maintenance areas conform to the purposes of the SIP. According to the implementing regulations promulgated by the EPA, proposed Federal actions must be specifically identified in the SIP, have minor emissions below threshold levels identified in the regulations, or offset any resulting increases in emissions.** Since this project is not identified in the SIP, an Applicability Analysis was prepared to determine the level of project-related emissions (see Appendix A). **In addition, analyses utilizing MOBILE5a and CAL3QHC models were conducted to address CO hotspots associated with the proposed action (see Appendix A).**

### 3.1.6 Noise

The Noise Control Act of 1972 was enacted to establish noise control standards and to regulate noise emissions from commercial products such as transportation and construction equipment. The Act exempts regulation of noise from military weapons or equipment designated for combat use. The standard measurement unit of noise is the decibel (dB), which represents the acoustical energy present. Noise levels are measured in A-weighted decibels (dBA), a logarithmic scale, which approaches the sensitivity of the human ear across the frequency spectrum. A 3-dB increase is equivalent to doubling the sound pressure level, but is barely perceptible to the human ear. Noise levels vary continuously with time. To account for this variance over time, the measure  $L_{eq}$  is used, which is the average sound pressure level measured in decibels over any selected time period.

The Federal Highway Administration (FHWA) has established noise abatement criteria for roadways. In the absence of more stringent local standards, these criteria are used to evaluate existing noise levels on the roadways outside the WNY as part of the analysis of baseline conditions (see Table 3-1). An exterior  $L_{eq}$  of 72 dBA is the standard typically used to evaluate noise levels in developed urban areas similar in character to the roadways surrounding the WNY (see Activity Category C, Table 3-1). The Department of the Navy has set a noise standard of 84 dBA for eight hours of constant noise (OPNAVINST 5100.23c) which serves, along with EPA noise standards for construction, as the noise abatement criteria within the WNY.

**Table 3-1: Threshold for Noise Interference and Noise Abatement Criteria (dBA)**

Activity Category	Noise Abatement		Criteria Description of Activity Category
A	$L_{10}$ 60	$L_{eq}$ 57	Tracts of land for which serenity and quiet are of extraordinary significance and which serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, open spaces, or historic districts that are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B (Exterior)	70	67	Picnic areas, recreation areas, playgrounds, (Exterior) active sports areas, and parks that are not included in Category A and residences, motels, hotels, public meeting rooms, schools, churches libraries, and hospitals.
C (Exterior)	75	72	Developed lands, properties, or activities not included in Category A or B above.
D	--	--	For requirements on underdeveloped lands see paragraphs 11a and c of Federal Aid Highway Program Manual Volume 7, Chapter 7, Section 3.
E (Interior)	55	52	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: FHWA Report "A Field Review of Highway Traffic Noise Impact Identification and Mitigation Decision-making Processes."

$L_{eq}$  is the average sound pressure level measured in decibels over any selected time period.

$L_{10}$  is the upper 10 percent of the sound pressure level measured in decibels over any selected time period.

The neighborhood area around the WNY is generally urban in character, with the primary sources of noise being traffic on roadways, pedestrians on sidewalks, and aircraft fly-overs. The two principal roadways that bound the site are M Street to the north and 11th Street to the east. Existing noise  $L_{eq}$  levels were measured using a Norsonic Type 116 Integrating Sound Level Meter, set at the A-Weighted Octave. The  $L_{eq}$  measurements for three consecutive one-minute intervals were recorded at each monitoring location at two distinct monitoring times. Noise  $L_{eq}$  levels were recorded at four different monitoring locations around the perimeter of the WNY (exact monitoring locations depicted as points A, B, C, D in Figure 3-3) during the WNY's peak

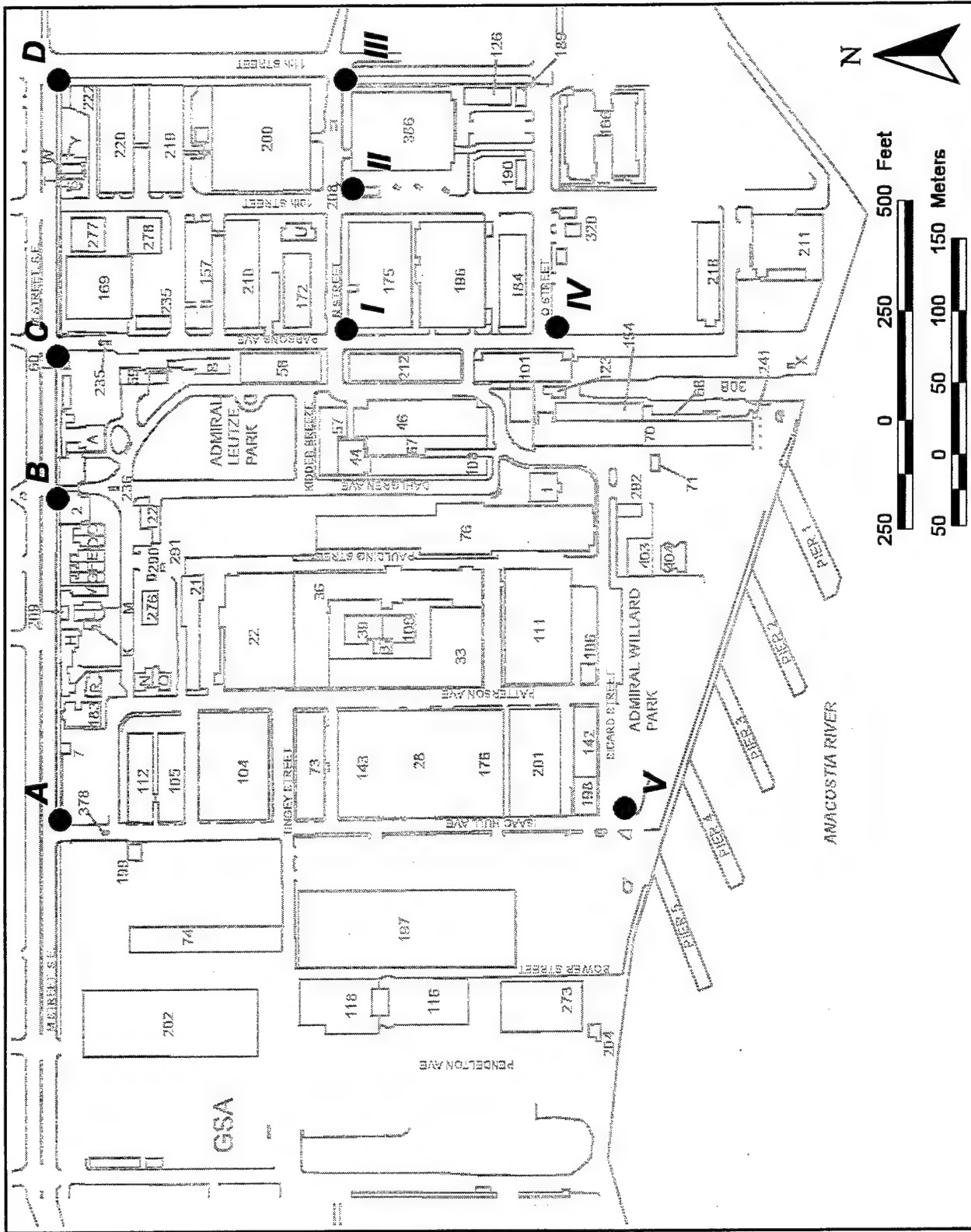


Figure 3-3: Noise Monitoring Locations at the WNY

morning (5:53 a.m. to 8:15 a.m.) and afternoon (3:15 p.m. to 4:57 p.m.) commuting hours. These monitoring sites were selected to coincide with the locations of a traffic volume and movement study conducted as part of an environmental assessment at the WNY completed in January 1996. Noise receptors in the vicinity of the monitoring sites were limited to residential and commercially developed areas on the north side of M Street. Measurements of noise  $L_{eq}$  levels at the monitoring locations were in the 66.4 dBA to 75.9 dBA range during the peak morning commuting hours, while afternoon measurements fell within the 68.9 dBA to 77.2 dBA range (see Table 3-2). No off-site residential noise receptors are located within 100 feet of the noise monitoring locations.

**Table 3-2: Noise Level  $L_{eq}$  Measurements**

Monitoring Site	Monitoring Time	Leq Measurements		
		#1	#2	#3
AM Measurements- Exterior Monitoring Sites				
A	6:21	68.1	69.8	67.5
	8:15	69.4	69.9	69.1
B	6:13	70.0	71.0	70.5
	8:08	74.9	75.9	70.9
C	6:03	72.8	66.4	72.7
	7:57	69.3	67.4	70.7
D	5:53	67.0	67.9	70.0
	7:46	71.9	74.1	73.1
AM Measurements- Interior Monitoring Sites				
I	7:24	63.9	65.6	66.3
II	7:30	72.5	74.2	64.2
III	5:44	64.1	63.0	62.7
	7:38	69.8	69.9	73.8
IV	7:16	63.9	62.9	61.3
V	6:47	58.7	55.8	58.4
PM Measurements- Exterior Monitoring Sites				
A	3:37	75.2	76.5	75.2
	4:57	76.1	75.0	76.9
B	3:30	74.8	75.2	76.9
	4:51	75.8	77.2	76.8
C	3:24	72.1	73.5	74.1
	4:46	73.6	77.1	76.2
D	3:15	71.0	70.3	68.9
	4:41	73.4	73.2	74.9
PM Measurements- Interior Monitoring Sites				
I	4:22	62.3	60.1	61.0
II	4:29	65.1	64.5	63.1
III	3:07	67.9	69.4	70.7
	4:35	69.4	69.5	71.2
IV	4:15	55.6	54.3	56.1
V	3:54	58.9	59.4	60.2

**Exterior Monitoring Site Code:**

A: M Street at Issac Hull Avenue  
 B: M Street at 8th Street  
 C: M Street at 9th Street  
 D: M Street at 11th Street

**Interior Monitoring Site Codes**

I: N Street at Parsons Avenue  
 II: N Street at 10th Street  
 III: N Street at Tingey Street  
 V: Issac Hull Avenue at Sicard Street

The WNY is generally institutional in character, with the primary sources of noise also being traffic on roadways, pedestrians, and aircraft fly-overs. Existing noise  $L_{eq}$  levels at five different primary one-lane, two-way roadway intersections within the WNY (exact monitoring locations depicted as points I, II, III, IV, & V in Figure 3-3) were measured using a Norsonic Type 116 Integrating Sound Level Meter, set at the A-Weighted Octave. The  $L_{eq}$  measurements for three consecutive one-minute intervals were recorded at each monitoring location at each monitoring time. Noise  $L_{eq}$  levels were recorded at the five interior monitoring locations during the WNY's peak morning (5:44 a.m. to 7:38 a.m.) and afternoon (3:07 p.m. to 4:35 p.m.) commuting hours. These monitoring sites were selected to coincide with the locations of a traffic volume and movement study conducted as part of an environmental assessment at the WNY completed in January 1996 and are therefore located adjacent to roadway intersections. Potential noise receptors in the vicinity of the monitoring sites are limited to institutionally developed areas within the interior of the WNY. Measurements of sound levels of vehicular traffic were in the 55.8 dBA to 74.2 dBA range during the peak morning commuting hours, while afternoon measurements were within the 58.9 dBA to 71.2 dBA range (see Table 3-2).

### **3.1.7 Infrastructure and Utilities**

The following infrastructure and utility systems at the WNY are described in this section: steam system; chilled water system; electrical system; water system; sanitary sewer system; stormwater system; natural gas system; and telephone system.

#### **3.1.7.1 Steam System**

The entire steam generation, distribution, and condensate return system for WNY is owned, operated, and maintained by the Navy Public Works Center (PWC), Washington, DC. Steam is generated in the central plant (Building 116) for space heating during the winter season. There are five gas-fired, water-tube boilers (two 85,000 lb/hr, two 120,000 lb/hr, and one 150,000 lb/hr). The two 85,000 lb/hr boilers were recently put into service. The three older boilers are programmed to be decommissioned once it has been determined that the new boilers are trouble-free. All five of the dual fuel boilers primarily utilize natural gas, but are also capable of using No. 2 fuel oil as a backup fuel. The capacity of the plant on gas is 170,000 pounds per hour of steam. The peak steam demand is approximately 65,000 pounds per hour. Two 110,000-gallon aboveground fuel oil storage tanks are located adjacent to Building 116 providing 220,000 gallons of total fuel oil storage capacity. Two additional 110,000-gallon aboveground fuel oil storage tanks have been requested to supplement the fuel storage capacity. Currently, fuel storage does not meet the requirement for a 30-day fuel supply. Fuel oil is purchased on an as-needed basis.

The steam distribution system on the installation consists of a variety of aboveground and underground conduit types, which vary from two-inch to 10-inch-diameter pipes. The steam distribution system in the eastern part of the WNY has recently been replaced with new high-pressure steel conduits.

The steam plant services all of the WNY installation, as well as a portion of the adjacent GSA property, with the exception of Buildings 211 and 218 which share an independent heating system, and the residential housing buildings which have their own heating units. The peak steam demand of 65,000 pounds per hour includes the portion of the steam going to the

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Southeast Federal Center. The central plant is shut down during the summer season. Under normal conditions during the winter, the boilers are utilized on a rotating basis.

Recent improvements to the physical plant/distribution system have increased the thermal efficiency of the boilers to approximately 83 percent, well within operating efficiency guidelines. The condensate return system is continually being upgraded as buildings are renovated or converted to other uses. These improvements have resulted in approximately 80 percent of the condensate being returned to the central plant.

#### ***3.1.7.2 Chilled Water System***

Currently there is no central chilled water system at the WNY to support air conditioning of buildings. Most buildings have individual systems.

#### ***3.1.7.3 Electrical System***

Potomac Electric Power Company (PEPCO) provides electricity to the WNY. PEPCO's main power plants are located in Virginia and Maryland. Power is provided to the WNY from the substation located on the southern side of M Street, SE in the Southeast Federal Center. Service enters the complex via this substation in an underground duct system to the main switchgear located in Building 118. Service to the installation is provided by four 13.2-KV, three-phase, 60-hertz feeders. The power to the base is distributed from Building 118 via two buses.

Recent improvements to the physical plant/distribution system have upgraded the switchgear in Buildings 176, 219, and 220, and the eastern portion of 36, as well as a completely new distribution system.

Electrical consumption data indicates that in FY 1994 the annual electrical power requirement was estimated to be 105,400,000 kilowatt-hours (KWH).

Emergency generators can provide emergency power only to individual buildings within the WNY. These generators are self-contained units that allow for varying amounts of continual operation. The existing electrical generating plant, which used to supply electrical power to the WNY, was powered by the steam plant. The new boilers would not include support of the electrical generation system, which will remain out of service.

#### ***3.1.7.4 Water System***

Potable water for the District of Columbia comes from the Potomac River and is treated at the Dalecarlia and McMillan Reservoirs. The reservoirs are operated by the U.S. Army Corps of Engineers. The existing domestic water distribution and fire service system is an almost fully gridded system fed to the WNY by the District of Columbia, Department of Public Works system from three separate locations and from one location through the Southeast Federal Center. The following is a listing of these connections:

- A 16-inch (40.6 Cm) connection to a 36-inch (81.3 Cm) DC main in M Street, SE, at the Latrobe Gate. This connection runs south through the gate from M Street. The WNY



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Master Shore Station Development Plan indicates that this connection is metered.

- An 8-inch (20.3 Cm) connection to an 8-inch high-pressure DC main in M Street, SE, at 9th Street, SE. This connection runs south through the gate from M Street in Parsons Avenue. The WNY Master Shore Station Development Plan indicates that this connection is metered.
- An 8-inch connection to a 30-inch (76.2 Cm) DC main in 11th Street, SE, at O Street, SE. This connection runs west through the gate from 11th Street. The WNY Master Shore Station Development Plan indicates that this connection is metered.
- A 16-inch connection to a 36-inch DC main in M Street, SE, between 5th and 6th Streets, SE. This connection runs south and then east from M Street through the Southeast Federal Center. The WNY Master Shore Station Development Plan does not indicate that this connection is metered.

The distribution system consists of approximately 16,250 linear feet (4,953 linear meters) of cast iron and ductile iron pipe, ranging from 4 (10.2 Cm) to 16 inches in diameter.

There are no additions or upgrades currently being made to the WNY water system with the exception of normal maintenance and repair. Records indicate that a majority of the water main system is 30 or more years old. The design life of cast iron and ductile iron pipe is generally accepted as 100 years, and cast iron pipe has been in service in many cities for well over 150 years (ASCE August 1914, Vol. 40 No. 6, page 1647, "External Corrosion of Cast Iron Pipe"). Ductile iron pipe has been in service since the late 1940s and current research indicates that corrosion resistance is approximately 35 percent greater than cast iron pipe (Ductile Iron Pipe Research Association). The PWC is currently undertaking a study of the existing water system to develop a computer model, Kentucky Pipe model (KYPIPE), of the hydraulics of the system, which would be used to analyze the pressure and flow in the existing system and the effect that new demands may have on the system.

From a capacity viewpoint, the staff at PWC considers the sizes of the various mains to be adequate, with minor exceptions that may be revealed by a more detailed study. The current KYPIPE study should reveal any major inadequacies. No major problem with the water system has been reported.

### ***3.1.7.5 Sanitary Sewer System***

Wastewater from the WNY is discharged into the District of Columbia Department of Public Works wastewater collection system and treated at the Blue Plains Treatment Plant in Washington, DC. The WNY's wastewater collection system is served by a lift station located in Building 199 at the Southeast Federal Center. This lift station pumps to the DC Pumping Station located on N Place, SE, which, in turn, pumps to the Blue Plains Treatment Plant. The collection system on the WNY is a combination of gravity and forced main sewers depending on the relative elevation of the facility served and the elevation of the Building 199 lift station. The on-base lift stations have been equipped recently with emergency back-up generators to supply power during power outages. Lateral sewer lines, on-base lift stations and appurtenances feeding the lift station are owned, operated, and maintained by the PWC. The Building 199 lift station is owned and operated by the GSA, but maintained by the PWC.



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The collection system consists of approximately 13,500 linear feet (4,115 linear meters) of concrete, brick, and cast iron pipe, ranging from 4 to 24 inches in diameter. Records indicate that a majority of the sewer lines were installed more than 30 years ago and have deteriorated in some areas. It is anticipated that the proposed building renovations would connect to the existing base sanitary sewer system.

From an actual capacity viewpoint, the staff at the PWC considers the sizes of the various laterals to be adequate, with minor exceptions that may be revealed by a more detailed study. A detailed as-constructed survey as well as an inflow/infiltration study of the existing sanitary sewer system should reveal any major inadequacies. Any deficiencies identified could be corrected as part of the building renovation.

#### ***3.1.7.6 Stormwater System***

Stormwater management in the District of Columbia is regulated by the Stormwater Management Section of the Department of Consumer and Regulatory Affairs (DCRA), Soils Resources Branch. District of Columbia Law 5-188, Section 509-519, requires all new development to control non-point source pollution transported by urban runoff, using Best Management Practices (BMP).

The existing WNY stormwater drainage system has been in place for more than 30 years, with additions and modifications taking place over time. It consists of a system of underground drainage piping/inlets and structures that convey stormwater flows into the Anacostia River. The system's piping was originally designed to carry the runoff generated by a 10-year frequency storm. Indications over time are that the system is functioning as originally designed. Because the WNY is almost completely paved, very little soil erosion takes place. The collection system consists of approximately 22,000 linear feet (6,706 linear meters) of concrete, brick and cast iron pipe, ranging from 4 to 30 inches in diameter.

A Stormwater Pollution Prevention Plan for the WNY was prepared in 1996. **The Navy has obtained a draft National Pollutant Discharge Elimination System (NPDES) permit for the outfalls at the WNY from the EPA and is working to improve the quality of discharged effluent from the installation.** To support the Stormwater Pollution Prevention Plan for the WNY and the requirements for obtaining a NPDES permit for the outfalls, the Navy has conducted an illicit discharge study of the WNY and is implementing corrective actions. Stormwater from the project area is collected and directed to outfalls in the western portion of the base.

#### ***3.1.7.7 Natural Gas System***

Natural gas is supplied to the WNY by the Washington Gas Light Company by multiple connections to various buildings. The main connection is via an 8-inch-diameter wrapped steel (WRPD) main that enters the complex within the Southeast Federal Center near Building 229 from an 8-inch WRPD in M Street, SE. This service enters Building 118/116 to provide natural gas to power the steam boilers. Natural gas is primarily used for steam generation; however, a few buildings use natural gas for space heating, and a small amount is used for cooking. Natural

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gas consumption in FY 1994 was estimated to be approximately 1,539,000 therms, with the highest usage occurring in December and January.

### **3.1.7.8 Telephone System**

Telephone service is provided by Bell Atlantic Telephone Company. The telephone distribution system is via an underground duct bank and manhole system. There are currently approximately 6,500 telephone lines in use. Internally, the majority of phone equipment and building systems are provided by the American Telephone and Telegraph Company (AT&T).

The existing telephone system adequately serves the complex and has the capability to be expanded by approximately 50 percent (6,000 additional lines). Should additional phone lines be required, an additional trunk line would be installed below grade from the GSA-owned Southeast Federal Center property located adjacent to the WNY.

### **3.1.8 Transportation**

A traffic management plan (TMP) was updated and prepared for the proposed BRAC 95 NAVSEA relocation action to provide an evaluation of the existing transportation access and operational conditions at the WNY and adjacent streets (see Appendix B). The TMP also evaluates the projected transportation conditions and provides recommendations for appropriate traffic and parking management strategies.

The WNY is bordered on the south by the Anacostia River, on the north by M Street, on the east by 11th Street and access ramps to the elevated Interstate 295 (I-295) freeway, and on the west by the GSA's Southeast Federal Center.

The WNY is easily accessed via I-295 and I-395. The current Average Daily Traffic (ADT) volumes indicate that these grade-separated arterials are heavily traveled. Based on ADT maps provided by the District in 1993, approximately 91,200 vehicles utilized I-295 per day and I-395 carries approximately 186,300 vehicles per day.

Immediate and principal access to the WNY is available from signalized intersections at M and 9th Street/Parsons Avenue (main entrance gate) and the 11th Street and N Street access gate. The 9th and M Street entrance serves approximately 38% of the inbound traffic and 41% of the outbound traffic during the AM and PM peak hours, respectively. Similarly, the 11th Street and N Street gate serves approximately 55% of the inbound traffic and 35% of the outbound traffic during the AM and PM peak hours, respectively. Secondary access is provided at the Isaac Hull Avenue and Tingey Street gate, which provides direct access to and from the Southeast Federal Center. At this entrance, approximately 7% of the AM peak hour inbound traffic and 7% of the PM peak hour outbound traffic access the WNY. The signalized intersection of M Street and Isaac Hull Avenue provides egress from the WNY from 3:15 PM to 4:30 PM daily and is closed at all other times. Descriptions of M Street and 11th Street are as follows:

- **M Street, SE:** is an at-grade, east-west, two-directional, six-lane divided facility, with traffic signals at major intersections and a relatively moderate traffic volume of 13,000 to 17,000 vehicles a day, based on ADT maps provided by the District of Columbia. West of the WNY,

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M Street extends across South Capitol Street. East of the WNY, M Street changes character and becomes a narrow two-way street at the signalized intersection of 11th Street.

- **11th Street, SE:** south of M Street, consists of a one-way, three-lane, southbound roadway. The left lane of this roadway provides direct access to the southbound on-ramp to the I-295 Bridge; north of M Street, 11th Street becomes a two-way undivided two-lane arterial.

The Navy Yard Metro station on the Green line is located at 1st Street and M Street SE and the Eastern Market Metro station is located at 8th Street and Pennsylvania Avenue, SE. It takes about 10 minutes for an average walker from the Navy Yard Metro train platform to reach the nearest gate of the Navy Yard at Isaac Hull Avenue, and up to 20 minutes to reach the furthest gate at 11th Street and N Street. The Eastern Market Metro station has approximately the same accessibility to the WNY as the Navy Yard Metro station. From the Eastern Market Metro station, bus numbers 90 and 92 can be utilized to arrive at the WNY. Commuters can utilize a Metrobus transfer from the Metrorail to the bus for \$0.25. When leaving the WNY, utilizing the Metrobus costs \$1.10. The WNY is served by two bus lines along M Street SE from the Navy Yard Metro station: Minnesota Avenue - M Line (four routes), and Anacostia - Eckington Line (two routes). Westbound bus stops are located along M Street SE at 4th Street, Isaac Hull Avenue, 7th Street and 10th Street, while eastbound bus stops are located at 10th Street, 8th Street, 7th Street, and 4th Street.

There are six access points to the WNY, three of which are located on M Street, two on 11th Street and one on Tingey Street. The main gates are located at the signalized intersections of M Street/9th Street and 11th Street/N Street. The WNY is an open military installation, but a guard is posted during the operation hours of each gate to check identification. A description of each of the access points is as follows:

- The M Street/9th Street access is open 24 hours. The lane configuration is typically one lane in the inbound direction and one lane in the outbound direction. Between 3:15 PM and 4:30 PM both lanes operate in the outbound direction.
- The N Street/11th Street access lane configuration is typically two lanes in the outbound direction and one lane in the inbound direction. Between the hours of 6:30 AM to 7:45 AM this access is used for inbound traffic only.
- The M Street/8th Street or Latrobe Gate is located at a signalized intersection. The access lane configuration is one lane for both inbound and outbound traffic. This gate is restricted to WNY residents and special guests only.
- The M Street/Isaac Hull Avenue access is open between 3:15 PM - 4:30 PM with one lane operating in the inbound direction and one lane operating in the outbound direction. This intersection is signalized during the time period when the WNY access is open.
- The Tingey Street/Isaac Hull Avenue access is provided via the Southeast Federal Center and is one lane inbound and one lane outbound.
- The O Street/11th Street access is not currently used.

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The internal streets of the site (N Street, Harwood Street, Sicard Street, and Isaac Hull Avenue) form a major east-west, two-lane collector-distributor that winds around the south side of a large central core area. At its eastern end, this roadway ends at the major signalized access gate of 11th Street. At its western end, it connects to the Southeast Federal Center via the minor access gate of Isaac Hull Avenue and Tingey Street. Parsons Avenue is a two-lane north-south roadway within the WNY. Parsons Avenue crosses the east-west collector-distributor at N Street, where a traffic signal is located. Parsons Avenue begins in the north at the M Street/9th Street gate and continues southward, where it feeds into several major parking lots. East of Parsons Avenue lies a grid pattern of multi-level administrative office buildings that continues to 11th Street and includes a seven-level parking garage. In the middle of this office building zone, 10th Street, a two-lane roadway, provides convenient secondary access to the area. At its north extremity, 10th Street dead-ends just short of M Street, while at its southern end it feeds into parking lots on the WNY.

The area west of Parsons Avenue and north of the major east-west corridor is served by minor streets. This area consists of two very distinct zones with no direct street link between them. The southeastern portion of this area is primarily large industrial warehouses served by a grid network of minor roadways. The northeastern portion of this section consists of landscaped open areas and sidewalks, residential buildings that face the WNY along M Street, and Navy Museum related-use buildings west of Parsons Avenue.

Data collected regarding access to the WNY shows that the majority of AM peak commuters enter the installation through the 11th Street gate, while employees exiting the station during the PM peak hours use the gate on 9th Street slightly more than the one on 11th Street. It is important to note that the AM and PM peak commuter traffic volume for WNY employees differs from the surrounding peak AM and PM commuter traffic volume. A minor overlap of WNY and metro peak commuter hour traffic volume occurs during the PM peak.

#### **3.1.8.1 Traffic**

A series of traffic counts were conducted as a basis for evaluating traffic conditions of local roadways servicing the WNY. Counts were conducted at various intersections, including access gates to the installation. The majority of local traffic occurs during the daytime hours, with the highest levels typically occurring at 9 AM, 1 PM and 4 PM. These volumes can be attributed to Washington, DC area commuters, a portion of whom are employed at the WNY. To assess traffic conditions adequately, turning movement counts were conducted at designated intersections in April 1995 between: 6:30 AM and 9:00 AM; 11:30 AM and 1:30 PM; and 3:00 PM and 6:00 PM. Spot counts were performed in March 1996 and show no significant change in traffic volumes. The morning network peak hour is from 7:15 - 8:15 AM and the evening peak hour is from 4:15 - 5:15 PM.

A summary description of the intersections analyzed in the TMP is presented in Table 3-3. All signalized intersections along the sections of M Street SE and 11th Street SE adjacent to the site were studied, as well as the only signalized intersection (Parsons Avenue/N Street) inside the WNY. All access gates to the WNY site were counted to ensure that all vehicles and pedestrians entering and exiting the site were included. The other intersections were selected to evaluate the existing traffic conditions and to determine their potential for serving future increases in traffic demand. The peak hour capacity analyses follow the guidelines in the *1994 Highway Capacity*

*Manual, Special Report 209.* Level of service designations for the studied intersections are shown in Table 3-3.

Considering that a Level of Service (LOS) D or better is recognized as acceptable for urban peak hour traffic operations, all but two of the intersections surveyed operate satisfactorily. The exceptions are: peak AM traffic at 7th and M Street (southbound 7th Street traffic turning left - LOS E); and peak AM and PM traffic at the South Capitol/M Street intersection (combined commuter traffic volume at this major intersection exceeds capacity). Although the analysis indicates that LOS the M/7th Street intersection operates at LOS E, left-turn movements are actually facilitated by adjacent signalized intersections which interrupt traffic flow. All of the internal intersections within the WNY operate at a LOS A or B with a substantial capacity reserve.

**Table 3-3: Existing Peak Hour Capacity Analysis**

Intersections	Traffic Control	Levels of Service (LOS) (measured in seconds)		
		AM Peak Hour	Midday Peak Hour	PM Peak Hour
M St. @ Isaac Hull Ave.	2-phase signal	N/A	N/A	B(8.9)
M St. @ 7th St.	TWSC	E (SB: 36.4)	N/A	D (SB:25.5)
M St. @ 8th St.	2-phase signal	B (6.6)	N/A	B (6.5)
M St. @ 9th St./Parsons Ave.	2-phase signal	B (9.1)	N/A	B (10.9)
M St. @ 11th St.	3-phase signal	C (17.3)	N/A	C (18.5)
N St. @ 11th St.	2-phase signal	B (10.8)	N/A	C (16.6)
N St. @ 10th St.	TWSC	B (NB: 9.8)	A (NB: 4.5.)	B (NB: 5.4)
N St. @ Parsons Ave.	2-phase signal	B (7.1)	B (6.5)	B (9.2)
O St. @ Parsons Ave.	TWSC	A (WB: 3.3)	A (WB: 3.2)	A (WB: 3.2)
Isaac Hull Ave. @ Sicard St.	AWSC	A (2.0)	A (142)	A (16)
Isaac Hull Ave. @ Tingey St.	AWSC	A (2.5)	N/A	A (1.9)
South Capitol St. @ M St.	3-phase signal	F (*)	N/A	F (*)

TWSC: Two-Way Stop Control; AWSC: All-Way Stop Control

LOS: See Appendix C for level-of-service definition.; \*: Volumes exceed capacity of the intersection.

SB: Southbound Approach

The 5,400 employees at the WNY generates approximately 1,492 vehicle trips during the AM peak hour and 1,227 vehicle trips during the PM peak hour. When compared to the average number of vehicle trips per employee for a military base/governmental office complex, as listed in the Institute of Transportation Engineers' (ITE) Trip Generation Handbook, the WNY vehicle trip rates are at the lower end of the range. This may be a reflection of the available nearby Metro stations and of car/vanpool usage. Single occupancy vehicles (SOV) account for 68 percent of the vehicle population; car/vanpools account for 21 percent of vehicle population; and public transit accounts for 11 percent of the population.

### 3.1.8.2 Parking

There are currently 3,586 vehicle parking spaces at the WNY. Approximately 73 percent of the existing parking spaces are located on large surface lots and/or structured parking situated along the southern periphery of the installation. A seven-level, 1,013-car-capacity parking structure is

located near the 11th Street/N Street gate. The remainder are dispersed throughout the installation along side streets or adjacent to buildings. Table 3-4 shows the current designation for parking at the WNY. The employee-to-parking-space ratio at the WNY is currently 1.89. This ratio is higher than the long-range goal set by National Capital Planning Commission (NCPC) of three employees to one parking space.

In addition to the on-site parking, there are two remote overflow parking areas, one to the west of the WNY and one to the east. On the west side, a 500 space parking area (Lot 4) is located in the adjacent Southeast Federal Center just east of 4th Street. This lot is presently leased from the GSA and is not anticipated to be available in the future for use by the WNY. To the east of the WNY, three parking areas (Lots 1, 2, and 3) are situated under I-295. These lots are currently not used as they are overgrown by vegetation, remote, and isolated, and because adequate on-site parking is available at the WNY. Table 3-4 summarizes the existing parking supply.

**Table 3-4: Existing Parking at the WNY**

Type of Parking	Number of Spaces	Percent of Total
<b>On-Site</b>		
Individual	1,466	41%
Reserved/Assigned	440	12%
Quarters (Quarters/Visitors)	94	2.5%
Government	160	4.5%
Car/Vanpool	858	24%
Visitors	480	13.5%
Handicapped	88	2.5%
<b>Total</b>	<b>3,586</b>	<b>100%</b>
<b>Satellite Lots</b>		
Eastern Lots (# 1, 2, 3)	294	37%
Western Lot <sup>1</sup> (# 4)	500	63%
<b>Total</b>	<b>794</b>	<b>100%</b>

<sup>1</sup> Temporary; to be displaced by Southeast Federal Center

A field survey of the on-site parking usage was undertaken for a typical weekday, between 10 AM and 11 AM, in order to determine the peak parking occupancy rate. Of the total 3,586 available spaces, 439 (or 12 percent) were vacant at the time of the survey. The overall occupancy rate was estimated to be 88 percent.

### 3.2 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended, and as implemented in 36 CFR 800, requires Federal agencies to consider the effects of Federally funded, regulated, or licensed undertakings on cultural resources listed on or eligible for inclusion in the National Register of Historic Places and to afford the Advisory Council on Historic Preservation the opportunity to comment.

The Navy prepared a Cultural Resource Assessment of Effects (CRAE), to satisfy the Section 106 requirements, in conjunction with the proposed action. The goals of the CRAE are to determine



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how the NAVSEA relocation would affect qualifying historic buildings and features within the study area and known or potential archaeological resources. The CRAE was finalized in November 1996, and is incorporated into this EIS by reference. The following information is summarized from the CRAE.

Efforts to identify historic resources included a review of existing historical information, as well as original primary source research. The latter included: textual records research at the National Archives and the Naval Historical Center, historic photograph research at the Library of Congress and the National Archives, historic map and plan research, and on-site evaluations. Known and potential archaeological resources were identified on the basis of archival research.

Cultural resources are defined herein as either recorded or potential historic archaeological sites, prehistoric sites, and standing architectural structures or historic districts. The CRAE focused on cultural resources within the Area of Potential Effects (APE) associated with the NAVSEA relocation. The APE was delineated to encompass (1) all areas where landscaping or new construction may occur, (2) all buildings that may be rehabilitated for adaptive reuse, and (3) areas where new construction or rehabilitation of existing structures may have a visual effect on the surrounding buildings. The APE therefore encompasses all areas where the undertaking may have an effect on historic structures or districts as well as areas where ground disturbance may have an effect on archaeological resources.

### **3.2.1 Capsule History of the Washington Navy Yard**

The U.S. Department of the Navy was established in 1798. Soon thereafter, the first Secretary of the Navy, Benjamin Stoddert, succeeded in getting an appropriation which he used, in part, to build a yard "for the repair and construction of Navy ships in Washington, DC." Dedicated on October 2, 1799, the Washington Navy Yard's growth was initially slow, although by the War of 1812 it had become the largest shipbuilding installation in the country (Panamerican Consultants, Inc. 1994:5). When the British captured Washington in 1814, Captain Thomas Tingey, first Superintendent of the Washington Navy Yard, set the WNY's buildings and vessels afire to avoid their destruction and/or use by the British. Only a handful of buildings survived the blaze.

The rebuilding of the WNY resulted in the construction of those buildings required for ship production and repair: masts lofts, rigging lofts, an iron and copper shop, a saw mill, a block shop, a smith's shop, etc. This role was greatly aided in 1822 by the construction of a marine railway that made it possible for ships to be hauled from the river for repair. In 1827 the WNY was designated as a Navy Equipment Manufactory, with the production of anchors, cables, and steam machinery as its primary function. During this period the first ordnance facility in the WNY also became operational (it is not clear which one of the early WNY buildings housed the ordnance activity). The WNY was expanded by a landfill campaign to the west in 1828, and again in the 1850s.

The function of the WNY changed again in 1886, when the WNY was designated the Naval Gun Factory and all remaining shipbuilding structures were converted into facilities for ordnance production. By this time, approximately 20 major industrial buildings were extant at the WNY. In 1916, a Senate appropriations bill funded the expansion of the Naval Gun Factory to the west from 4th Street to 2nd Street, SE. The western end of the WNY became the site of industrial activities, while the eastern portion housed naval research and experimentation facilities. The United States' official entry into World War I in 1917 led to an extensive build-up in operations at the Naval Gun



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Factory, with over 10,000 people employed at the installation. With the advent of World War II, the WNY further increased operations, employing some 25,000 people. During this period, an increasing amount of gun and mount manufacturing at the WNY was done by private companies, with the Navy functioning as an ordnance manufacturing coordinator. To accommodate the new role, several administrative buildings were constructed in the eastern side of the WNY.

During the post-World War II period, the WNY further transformed from an ordnance administrative facility to a broader naval administrative center. In the 1950s, the WNY was still producing weapons systems, but naval gun production had been significantly reduced. After 1962, the western portion of the WNY was renamed the Navy Yard Annex and transferred to the General Services Administration in 1963.

### **3.2.2 Known and Potential Resources**

This section describes the architectural and archaeological resources identified at the WNY.

#### **3.2.2.1 Architectural Resources**

All buildings in the NAVSEA relocation area (except for Buildings 197, 116, and 118) are within the boundaries of the WNY Historic Precinct. The WNY Historic Precinct was listed on the National Register of Historic Places in 1973 and became a National Historic Landmark in 1976 (earlier, in 1968, the WNY was declared a Category II Landmark in the District of Columbia and two historic quarters, the Commandant's Office, and the Latrobe Gate were individually listed in the District of Columbia Inventory of Historic Sites). The boundaries for the National Register/National Historic Landmark district consist of M Street on the north, Parsons Avenue on the east, the Anacostia River on the south, and Isaac Hull Avenue on the west. Although numerous buildings (including Buildings 22, 28, 73, 104, 143, and 176 at the NAVSEA site) were mentioned in the nomination as "principal historic structures," no specific identification of contributing and noncontributing buildings was made. The sentry tower and the brick wall along M Street have also been determined eligible for the National Register.

The significance of the district is derived from both architectural and historical contributions. More specifically, the National Register/National Historic Landmark nomination emphasizes the WNY's seminal role in the history of the Navy. Not only was the WNY the first (government-owned) Navy Yard and as such the Navy's first home port, it also played an important role in the early military development of the United States. The nomination highlights the WNY's important role in naval research, in particular the advancements in ordnance production, the construction of the first marine railway, and research related to submarines. The site was also noted for its role in the development and manufacture of large-caliber guns for the Spanish-American War, World War I, and World War II.

Buildings 197, 116, and 118 are located within the boundaries of another National Register-eligible historic district, determined eligible in 1977 as an extension to the Washington Navy Yard and/or a separate industrial district. Determined eligible as the "Washington Navy Yard Annex," the area is bounded by M Street on the north, Isaac Hull Avenue on the east, the Anacostia River on the south, and First Street, SE, on the west. In the determination of eligibility documentation, Building 197 was described as "architecturally significant" and determined "individually significant as an industrial design." (Buildings 116 and 118 were not evaluated in the document.) The significance

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of the extension to the district is based primarily on architectural contributions. Specifically, eligibility is based on the district's "distinct scale and character as 20th century industrial buildings," and its association with 20th-century production of heavy ordnance for the U.S. Navy.

In addition to the National Register-related materials, documentation of structures at the site has been completed in the course of studies related to various potential construction projects at the WNY. The most substantive items in this category are the Building 104 WNY Historic Structure Report and Historic American Engineering Record Documentation for Building 36.

The buildings involved in the NAVSEA relocation date from four periods of ordnance manufacturing at the WNY: (1) the early transformation from shipbuilding and repair to naval ordnance manufacturing (c. 1840-98), (2) the increased production of military ordnance following declaration of war with Spain (c. 1898-1914), (3) World War I ordnance manufacturing (c. 1914-39), and (4) World War II ordnance activity (c.1939-50). To a greater or lesser extent, these buildings were among the many constructed at the WNY which played a role in the largest government-owned and operated ordnance manufacturer in the United States from the 1840s into the 20th-century.

The area of the WNY potentially affected by the NAVSEA project is located on the west side of the WNY and includes a small part of the Southeast Federal Center. In general, the site is a densely developed area occupied by an assortment of industrial buildings constructed over more than a century. The Area of Potential Effect also includes Willard Park and the waterfront area from approximately Slip No. 1 to an area adjacent to Building 204.

The heart of the area, and that which will be most affected by the project, is located along Isaac Hull Avenue roughly between Tingey Street and Sicard Street. On the east side of Isaac Hull, the buildings affected include a dense collection of tightly spaced or attached buildings that date from between the turn of the century and the 1940s. They include: Building 104 (Broadside Mount Shop), Building 73 (Secondary Mount Shop), Building 143 (General Store House #1), Building 28 (Ordnance Foundry), Building 176 (General Store House #2), Building 201 (Maintenance Shop), and Building 198/142 (Radio House/Fire Control). In general, these are long, cavernous structures with an east-west orientation. This form not only allowed for the construction of large guns and the individual parts in assembly lines but also permitted rail lines to run in and out of the buildings for easy movement of both raw materials and finished products. Four of the buildings compose part of what was one of the most impressive architectural sets at the WNY. Buildings 107 and 104 (now joined together as Building 104), Building 73, Building 112, and Building 105 are five nearly identical, adjoining, pedimented brick structures. This area also includes the Building 143/28/176 complex, a collection of attached brick and concrete World War I-era buildings.

The west side of Isaac Hull includes the open space adjacent to Building 197 (Gun Assembly Shop) that is currently being used as a parking lot. This area originally was the site of a group of smaller brick pedimented structures that echoed the design of the buildings on the east side. Building 197, which is also part of the NAVSEA project, is a large World War II-era steel building with concrete, brick, and corrugated wire glass banding.

Areas that are farther removed from the project but that are still in the APE include the adjacent buildings on the east side of Patterson Avenue: Building 21 (Pattern Storehouse), Building 22 (Foundry), Building 33/36 (West Gun Carriage Shop/Erecting Shop/South Gun Carriage Shop), Building 111 (Forge Shop), and Building 106 (Gas Plant). In general, these are the heart of the

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WNY's early industrial buildings. They are predominantly one- or two-story brick gable roofed structures with bearing walls. Other buildings within the APE located on the GSA-owned parcel include Buildings 74, 116-118, and 204.

### ***3.2.2.2 Archaeological Resources***

Potential archaeological resources that might be present in the APE include (1) sites associated with Native American use of the area, (2) sites associated with the early settlement of the Washington, DC area, and (3) features associated with the industrial use and expansion of the WNY.

Native American sites could date from as early as 9,500 BC to the mid-17th century when European colonization displaced the Native American Piscataway groups who occupied southern Maryland. There is much evidence of Native American occupation of the lower Anacostia River valley, and the archaeological site files maintained at the District of Columbia Historic Preservation Office contain one site, identified as 51SE17, in the WNY. However, the site form contains no information regarding specific location, site type, boundaries, or period of occupation, and it was not subjected to field verification.

The initial historic settlement in the present-day Washington, DC area began in the late 17th century with most of the land bound up in several very large agricultural landholdings. Even after the establishment of the Federal Capital in 1800, the landscape was predominantly rural and the population relatively sparse. Most of the original portion of the WNY was part of a large colonial holding known first as Duddington Manor, and later Cerne Abbey Manor. Occupation of the Duddington Manor property probably commenced circa 1715, but historical data has not yielded the precise locations of households within this vast tract. At the time of initial historic settlement of the area, the shoreline of the Anacostia extended north as far as the present location of M Street, and nearly all of the APE was submerged in the Anacostia River. Nearly all of the land within the APE was created by manmade expansion of the riverfront into an inlet along the Anacostia River known as St. Thomas Cove.

The original National Register Nomination for Washington Navy Yard Historic Precinct (Gerson and Brown 1973) describes the WNY as "an archeological site probably containing artifacts and other remains..." The National Register documentation for the Navy Yard Annex (Mones 1976) also alludes to the types of industrial archaeological resources that might be associated with the APE; the shrinkage pit used for the manufacture of gun barrels, located beneath Gun Shop 2 (Building 158), was identified as a specific archaeological resource that would merit investigation.

There have been a number of previous archaeological studies covering portions of the APE presently under study. These studies provide both general and specific information about the types of archaeological resources likely to be present in the APE:

- In 1980, an archaeological survey was initiated in conjunction with construction of a new WNY entrance along M Street, known as the Isaac Hull Gate. This survey identified foundation walls believed to be associated with Building 8 that stood during the period from circa 1872 through the 1960s and used as a stable, a garage, a general repair shop, a plating shop, and a storage area (McNett and Cissna 1980).
- A Phase I archaeological survey of the Southeast Federal Center undertaken in 1990-91

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included both archival research and subsurface field survey at selected locations. ESI's research indicates that most of the area for the NAVSEA relocation was filled in the mid-to late 19th century. One trench was excavated in an open area east of Building 74 where it was anticipated that derelict vessels associated with the filling of St. Thomas Cove might be present. The field survey identified the remains of a concrete bulkhead and demolition rubble associated with a building, but these finds were not considered archaeologically significant (Engineering Science, Inc. 1991).

- A preliminary archaeological assessment was carried out by John Milner Associates, Inc. (JMA) in connection with a Historic Structure Report for Building 104. The JMA study determined that Building 104 was on the site of a mid-19th century ordnance works and foundry, both destroyed circa 1899-1900. The investigators concluded that there was little likelihood that proposed rehabilitation would have an effect on significant prehistoric or historic archaeological resources, unless the rehabilitation required deep excavation in the area of the ordnance foundry (JMA 1989).
- Panamerican Consultants, Inc. (PCI) completed an archival and underwater archaeological investigation of the WNY. The PCI study focused on resources associated with the WNY and, therefore, did not address possible Native American or pre-1790 historic occupations. One possible archaeological resource, an early 19th-century shipwreck, was identified, with a projected location near the end of Patterson Avenue at the river bulkhead (PCI 1994).

The historical development of the WNY would have been expressed in the archaeological record by: numerous landscaping events (landfilling and expansion of the shoreline); installation of subsurface utilities and storage facilities; multiple episodes of building construction, expansion, alteration, and demolition; and the discard of industrial byproducts and refuse (including food, beverages, and pharmaceutical products). While the industrial buildings played an important role in the development of the WNY, many of these structures would have little visibility in the archaeological record aside from undistinguished foundation walls. These structural features would not represent an important source of historical information and should therefore not be considered archaeologically significant of and by themselves. Other archaeological resources in the WNY may represent distinct industrial buildings or facilities and, as such, embody important developments in industrial technology.

### **3.3 Socioeconomic Factors**

The WNY is located within census tract 72 of Ward 6 in the District of Columbia. Ward 6 is bounded by the Anacostia River, Florida Avenue, and North/South Capitol Streets. Census tract 72 is located in the southwest corner of Ward 6 and bounded by the 11th Street Bridge, Southeast Freeway, South Capitol Street, and the Anacostia River. The Southeast Freeway, while providing easy access to the WNY from Virginia and Maryland, isolates the site and the census tract from the surrounding community (see Figure 3-4: Project Area Land Use).

#### **3.3.1 Population**

According to 1990 census data, the total population of Washington, DC is 606,900 with 72,118 in Ward 6. The largest percentage, 53.3 percent, of the population of Ward 6 is between the ages

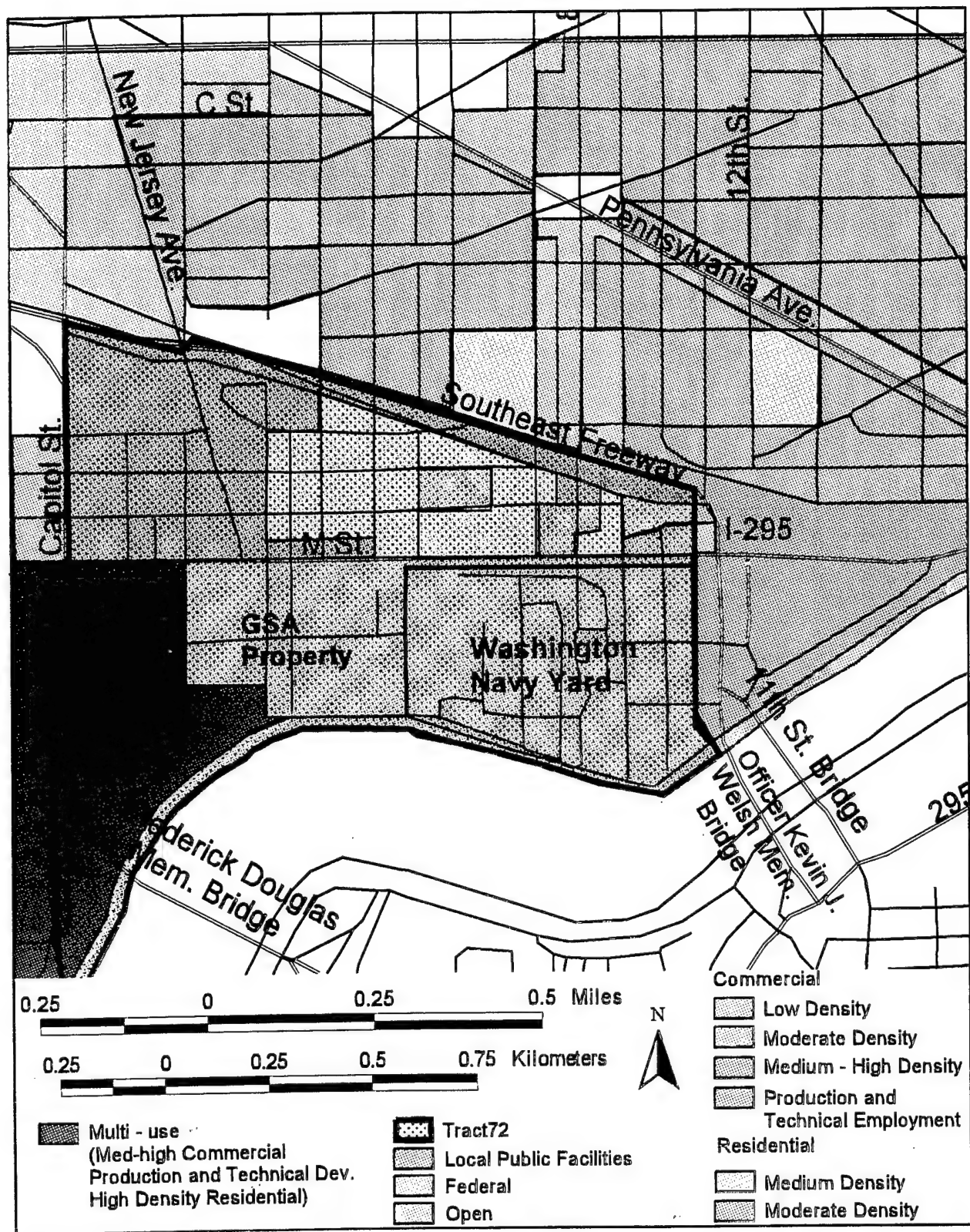


Figure 3-4, Project Area Map



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of 18 and 44. The next largest age group is 45 to 64 with 18.2 percent. Of the total population of Ward 6, 18 percent are under the age of 18. The majority of Ward 6 is African American (71.8 percent) followed by whites (26.4 percent). The remainder comprises Asian (0.9 percent), American Indian (0.2 percent), Hispanic origin (1.8 percent), and 0.6 percent falls into the other category. The average household has 2.3 persons, and the average family has 3.2 persons.

Ward 6 includes an affluent portion of Capital Hill as well as one of the lowest ranking median income level areas of the Washington, DC. Therefore, median income levels vary drastically for Ward 6 as a whole and for census tract 72. The median income for Ward 6 is \$32,647, while census tract 72 has the lowest median income for the entire Washington, DC at \$6,161. The second lowest median income for a census tract is \$10,206 (1990 Census: Population and Housing for the Washington, DC 1992).

The daytime working population of the WNY currently includes approximately 5,400 employees. A small resident population occupies 19 quarters located along the northern edge of the site.

### **3.3.2 Services**

A number of amenities, including community and personnel support facilities, are located at the WNY to serve both the daytime working population and the resident military population. They include:

- Fire station—Building 122
- Police station—Building 126
- Credit union—Building 218
- Post office—Building 203
- Chapel—Building 106
- Navy Exchange, service outlets, and uniform store—Buildings 184
- Installation restaurants/food services—Buildings 184 and 200
- Officers' Club—Building 101
- Indoor recreation facilities—Buildings 22, 73 and 166
- Outdoor recreation courts—Courts 276, 277, and 278
- Museums—Buildings 44, 57, 58, 67, 76, 108, and the U.S.S. Barry.

The focus of retail activity within the boundaries of the WNY are the military and civilian employees and visitors to the installation. The WNY Master Plan proposes the expansion of these services to accommodate the increasing on-site population. Plans are currently underway to expand retail services, particularly food services, within the WNY. Use of some of these facilities, such as the Navy Exchange, service outlets, and uniform store, is restricted to military employees, who account for approximately 15 percent of the total working population at the WNY. In response to current demands at the WNY, a change in existing retail food service in Building 200 is being explored. With respect to recreation opportunities, while various facilities are scattered throughout the WNY, they often do not include amenities such as showers or changing rooms.

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Little business development is located in the immediate vicinity of the WNY. Local service and retail activity is concentrated along the 8th Street/Pennsylvania Avenue retail strip located approximately six blocks north of the WNY. Several redevelopment plans have been developed for portions of southeast Washington, DC. These plans generally call for the conversion of vacant and underutilized properties to a mix of commercial/office, retail, and residential uses (see Section 4.3.3 for more information). Development plans for the Southeast Federal Center adjacent to the WNY include the establishment of a large retail component in the vicinity of the Navy Yard Metro Station. This influx of new business and workers is projected to stimulate economic development and employment opportunities in this quarter of the city as well as to enrich the Washington, DC government through increased tax revenues. The redevelopment scenarios are long-term plans projected to be implemented over the next 30 years, however. To date, few of the planned features have been realized.

### **3.3.3 Land Use, Zoning, Plans and Policies**

The WNY is situated in an urban area with a mixture of light industrial, government, residential, and commercial land uses, as well as vacant land. Small clusters of light industrial uses occur along M Street, South Capitol Street, and just to the east of the 11th Street Bridge, which borders the WNY. Adjacent to the WNY to the west is the Southeast Federal Center which consists of several large industrial buildings belonging to the GSA. Although specific projects and funding have not been designated, the Southeast Federal Center is planning to undergo massive redevelopment to provide a Federal office center for approximately 23,000 personnel. A large area of public housing is located to the north of M Street. Retail shops line 8th Street; however, the Southeast Freeway interrupts this commercial strip several blocks to the north of the WNY. Pockets of vacant land occur along M Street to the north of the WNY.

Over the years, the function of the WNY has evolved from shipbuilding to ordnance manufacturing to its current function as an administrative center. Existing land use at the WNY is shown in Figure 3-5. General office and administrative support is currently concentrated in the eastern portion of the WNY. The western portion includes large former warehouse/industrial structures that are currently vacant or house administrative, supply, storage, or maintenance functions. The central portion of the WNY forms the WNY historic core and includes the row of officers' quarters surrounding the Latrobe Gate and Leutze Park, the Marine Corps Museum, and the Naval Historical Center. The museums surround 8th Street, which terminates at Building 1, the historic Commandant's Office. The historic core is the focus for numerous tourists who visit the WNY each year and for special ceremonies held at the WNY.

### **3.4 Hazardous Substances**

The WNY currently functions as an administrative center, and is not a source or generator of large amounts of hazardous materials or wastes. Operations at the installation adhere to all laws and regulations pertaining to the use, storage, and/or disposal of hazardous materials.

Past industrial activities at the WNY, performed mainly during wartimes in support of our national defense, however, have raised concerns regarding the potential for contamination from hazardous materials at the installation. Products used in or resulting from these industrial



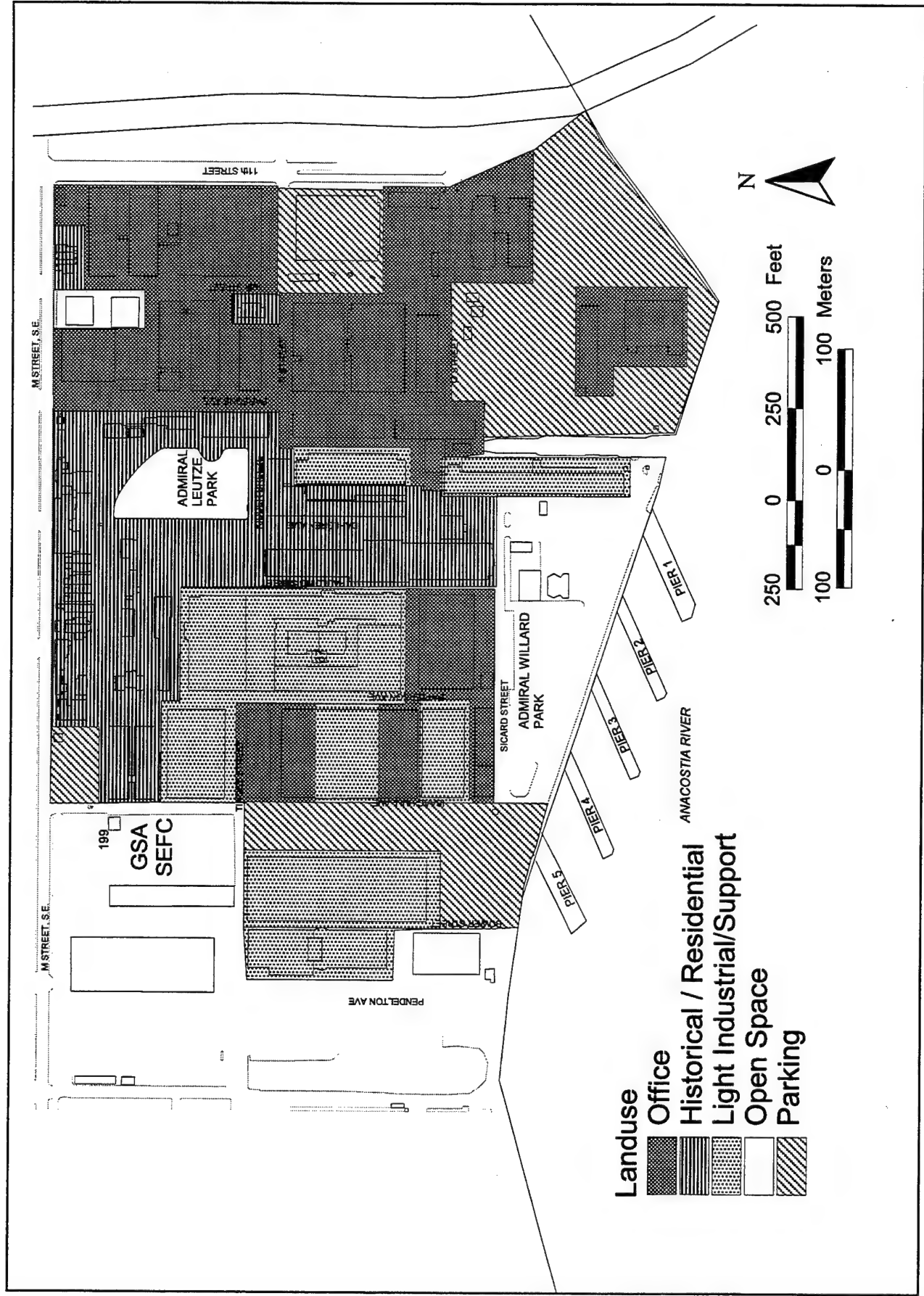


Figure 3-5: Existing Land Use at the WNY

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activities, such as plating, metal foundries, and machine shops, may have contained compounds that have been found to be hazardous in nature.

#### 3.4.1 Existing or On-going Investigations at WNY

The Navy has taken a series of actions separate from the EIS process that relate to the hazardous substance/contamination issues raised in the Draft EIS public comment period. These Navy actions include a number of completed and ongoing investigations, and coordination efforts with the EPA. Over the past four years, the following documents were prepared for the Navy to address base-wide contamination-related concerns at the WNY:

- *Final Preliminary Assessment (PA)*. November 1993. To assess the potential for contamination of the environment resulting from these previous activities, a PA was conducted at the WNY. The PA process is designed to identify possible areas of contamination within an industrial complex that may have been contaminated due to previous activities and differentiate between specific sites that pose little or no potential impact to human health and environment from sites that require further investigation. This study examined historical documents and conducted personnel interviews to determine the types and locations of activities that previously occurred on-base. The study also involved a search of Federal, state and local regulatory databases for information on hazardous materials and hazardous substances that could be associated with the installation. Identified in the PA were buildings associated with the NAVSEA relocation project.
- *Illicit Discharge Study WNY*. February (revised July) 1994. This report is a compilation of data collected during the project inspection of the illicit process connections to storm sewer lines at the WNY. Illicit connections are point source discharges of pollutants to storm drainage systems which are not composed entirely of stormwater and are not authorized by a NPDES Permit. The information was compiled to assist WNY in locating illegal connections or discharges that are connected to the storm sewer or discharged to grade and flows to a storm sewer structure. As a result of the study, 48 illicit discharge sources were identified from 27 different buildings as contributing to the stormwater conveyance system. These include the following buildings within the project site: 22; 28; 104; 105; 116; 143; 176; and 201.
- *Illicit Discharge Study WNY*. October 1996. This report has been prepared to identify exact outfall locations, verify the discharge points of the unconfirmed illicit connections, and to report the status of previously identified illicit discharges. This report identified the existence of illicit connections at the WNY at the following locations: Building 22; Slip #1; Building 116/118; and the Abandoned 8" Industrial Waste Line. As of February 1996, all illicit connections at the WNY were repaired or removed.
- *Stormwater Pollution Prevention Plan (SWPPP)*. March 1995. The Stormwater Pollution Prevention Plan is to be used by WNY personnel to reduce or eliminate the potential of stormwater pollution associated to industrial activities from entering the stormwater drainage system.
- *Stormwater Pollution Prevention Plan Update*. October 1996. This report updates the WNY SWPPP and summarizes the results of that evaluation.

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- *Final Site Investigation (SI).* September 1996. The SI was conducted in order to gain a better understanding of the nature of environmental and human health threats posed by contamination at the WNY. The sites are distributed throughout the base and provide a comprehensive overview of basewide conditions. Two of the sites and one Area of Concern are located within the project site. These include Buildings 28, 73, 104, 143, and 176 (Site 5), Buildings 116/118 and 197 (Site 6), and Building 201 (Area of Concern) The field investigation of the sites at the WNY included a land survey, a soil gas survey, and the collection of surface water, sediment, soil and groundwater samples for laboratory analysis.
  - *Phase I Preliminary Investigation of the Storm Sewer System, Preliminary Draft.* April 1997. This report is a result of a preliminary investigation to determine the general structural condition of the storm sewer system and recommend appropriate methods to clean and dispose of sediments from the system. It includes additional sampling required for sediment disposal purposes only.

Many plans and procedures are currently in place at the WNY that serve to reduce the impacts of installation activities on the environment. These include: a Spill Prevention, Control, and Countermeasures Plan; a Hazardous Waste Management Plan; a Pollution Prevention Plan; and a Stormwater Pollution Prevention Plan. The purpose of the SWPPP is to meet the requirements of the EPA's NPDES General Permit for Stormwater Discharges Associated with Industrial Activity. The SWPPP includes Best Management Practices (BMPs) which are practices and controls designed to minimize surface water pollution at its source (RUST, 1995). In addition, the Navy and the EPA are currently jointly engaged in several hazardous substance/contamination related efforts. These include the Navy's individual application to the EPA last summer for a NPDES permit for the WNY outfalls. This resulted in the issuance of a draft permit in early 1997 which covers all outfalls. The Draft NPDES permit requires a rehabilitation of the WNY's storm drainage system by June 1999, following completion of a system cleaning and evaluation. To support the Stormwater Pollution Prevention Plan for the WNY and the requirements for obtaining a NPDES permit for the outfalls, the Navy has conducted an illicit discharge study of the WNY and is implementing corrective actions. The EPA is also considering the listing of the WNY on the National Priorities List under the Comprehensive Environmental Response, Compensation, and Liability Act due to the contaminants found in the Anacostia River sediments adjacent to the installation.

#### 3.4.2 Summary of Existing Contamination Investigation Findings

Contamination from past practices at the WNY was confirmed in soils, storm drain sediments, groundwater, and building surfaces. Table 3-5 summarizes the contamination identified in and near the buildings associated with the NAVSEA realignment. Only contaminants found at concentrations above at levels of concern screening criteria are listed in Table 3-5. The levels of chemicals found in the environment or in different media (air, water, soils) were compared to levels determined by EPA to be acceptable. Chemicals found at levels above these guidelines were investigated further because of the potential for adverse affects to human health or the environment could result from exposure. Acceptable levels were determined for residential and industrial scenarios. Acceptable levels in residential areas are different from areas primarily used for industrial purposes due to exposure to children.

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Soil data were compared to EPA Region III Risk-Based Concentrations (RBCs) for industrial and residential soils. Groundwater data was compared to EPA Region III RBCs for tap water, EPA Federal Maximum Contaminant Levels (MCLs), and the District of Columbia MCLs. Sediment data was compared to Incidence of Adverse Biological Effects within Ranges (Effects Range Low and Effects Range Median) of Chemical Concentrations in Marine and Estuarine Sediments. A detailed description of the screening criteria used is provided in the WNY Site Investigation report (Navy, September 1996).

Although arsenic, beryllium, iron, lead, and manganese were detected in soil, stormwaters and/or groundwater, the pervasive nature of these metals suggests that they may not be indicative of contamination resulting from past site practices or operations at the WNY. In fact, these metals were found in some of the background samples (Navy, September 1996). Therefore, the elevated concentrations of these metals may be natural or may be associated with the fill used over much of the Navy Yard. Chloromethane, methylene chloride, and bis(2-ethylhexyl)phthalate, are common laboratory contaminants; as a consequence, detection of these compounds is not considered to be installation related (Navy, September 1996).

#### 3.4.3 Environmental Investigation of Proposed Project Site

To specifically address and evaluate contamination-related concerns associated with the location of the BRAC NAVSEA relocation at the WNY, the Navy completed the following investigation:

*Draft NAVSEA BRAC Construction Environmental Investigation WNY.* January 3, 1997. In direct support of the NAVSEA Headquarters relocation to the Washington Navy Yard, the Navy under the Atlantic Division, Naval Facilities Engineering Command Comprehensive Long-Term Environmental Action Navy (CLEAN) Program conducted an environmental investigation of seven buildings which will be renovated or replaced as part of the action. The investigation encompassed Buildings No. 28, 104, 142, 143, 197, 198, and 201. The purpose of the investigation was to confirm the presence or absence of contaminants in the project area and to develop an understanding of potential threats on human health and the environment. The focus of the investigation was to determine appropriate safeguards that may be required during construction, to protect workers.

The investigation was divided into two phases: Phase I included interviews of appropriate persons and record searches of relevant information. Phase II was a field investigation which included sampling and analysis. The buildings investigation encompassed shallow and deep subsurface soil, groundwater, paint, and surface material sampling and a laboratory analysis of sampled media. The report concludes with several recommendations which were developed based on the assimilation of the analytical results and the consideration of proposed activities and future uses of each of the buildings. These recommendations would be incorporated into the construction requirements to protect construction workers, employees on the Navy Yard, the surrounding community, and the environment.

**Table 3.5: Summary of Identified Contamination Above the Levels of Concern in the Areas Designated for NAVSEA**

Building	Soils Contamination		Stormwater & Sediment		Groundwater Contamination		Surface Contamination	
	Navy, 9/1996	Baker, 1997	Navy, 9/1996	Baker, 1997	Navy, 9/1996	Baker, 1997	Navy, 9/1996	Baker, 1997
28	benzo(a)pyrene, arsenic, beryllium, iron	arsenic, beryllium, iron, lead, TPH diesel	NR	NR	iron, manganese	benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, benzo(b)fluoranthene, barium, iron, manganese, TPH diesel	NR	lead, TPH diesel
73	benzo(a)pyrene, arsenic, beryllium, iron	NR	NR	NR	chloromethane, methylene chloride, arsenic, beryllium, copper, iron, manganese, mercury, nickel	NR	NR	NR
104	arsenic, beryllium, iron	benzo(a)pyrene, arsenic, beryllium, TPH diesel	NR	NR	chloromethane, methylene chloride, total (arsenic, beryllium, copper, iron, lead, manganese, and nickel), dissolved (beryllium, iron, manganese, and nickel)	NR	NR	lead, TPH diesel
142	arsenic, beryllium, iron, lead	arsenic, beryllium,	NR	NR	antimony, arsenic, iron, manganese	manganese, TPH diesel	NR	lead, TPH diesel
143	NR	NR	NR	NR	NR	NR	NR	NR
197	benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, arsenic, beryllium, iron, lead	benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, pentachlorophene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, arsenic, beryllium, iron, TPH diesel, TPH gasoline	NR	NR	benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, methylene chloride, benzene, bis(2-ethylhexyl) phthalate, total (arsenic, beryllium, cadmium, iron, lead, manganese, and nickel), dissolved (antimony, arsenic, beryllium, iron, and manganese)	iron, manganese, thallium, TPH diesel, TPH gasoline	NR	aluminum, arsenic, beryllium, copper
198	NR	arsenic, beryllium, TPH diesel	NR	NR	NR	arsenic, iron, manganese	NR	NR
201	arsenic, beryllium, iron, lead, PCBs (below industrial standards)	arsenic, beryllium, TPH diesel, antimony	NR	NR	arsenic, iron, lead, manganese	iron, manganese	NR	TPH diesel

NR = Not Reported

Note: The levels of concern screening criteria refers to industrial and residential risk-based conclusions (RBCs) for soil, tap water RBCs, Federal maximum contaminant levels (MCLs), and DC groundwater regulations for groundwater and surface water, and effects range-low (ERL) and effects range-median (ERM) for sediment.

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The following are brief summaries of the history and current use of each building from the investigation:

- **Building 28.** Building 28 was constructed in 1941 on the site of two previous buildings both bearing the number 28. The first Building 28 was erected in 1861 as the ordnance foundry. In 1915, most of the original building was demolished and the next Building 28 was constructed. Later, in 1942, Building 28 was again renovated to its current appearance. Building 28 has been used since 1942 as a supply staging area, office space, and warehouse.
- **Building 73.** The site of Building 73 can be traced back to 1845 when an ordnance laboratory was established at the site. The 1872 plan of the WNY shows the area to be a vacant lot. The 1898 plan indicates that underground storage tanks were present on the site. Building 73 was constructed between 1898 and 1902, and used as a specialized gun mount shop. The building also was utilized as a secondary mount shop, torpedo shop, roughing shop, erecting shop annex, broadside mount shop annex, Shop 28 Annex 2, aluminum cleaning facility, welding and fabricating shop, storage, snack bar, and supply department. Building 73 currently houses two tennis courts for recreational use.
- **Building 104.** The prior buildings on this site included a timber shed, ordnance works, ordnance foundry, and a boiler house. The current building was constructed in 1901 as a Tool Shop. In 1902 an adjacent building was constructed, the miscellaneous shop for ordnance, which later became part of Building 104. The buildings were reportedly used for the mass production of inspection tools for ordnance manufacture, parts of guns, and pieces of wireless equipment.
- **Building 142.** This was constructed in 1915 as a radio station; in 1919 its name was changed to the radio test laboratory. In 1939 Building 162, the fire control lab, and the existing Building 142 were combined to form the current Building 142. From 1942 to the present, Building 142 served as Building Trades Electrical, a branch of the Public Works Department, the Public Works Maintenance Shop, and is currently occupied by the Naval Station Washington Staff Civil Engineers. The western wing of the building contains office space on the second floor and a sheet metal shop on the first floor.
- **Building 143.** This building was completed in 1915 on the former sites of the locomotive shed, sulfur house, torpedo tube test shop and the trophy gun park. It served as the General Storehouse No. 1 and provided storage space for the supplies and finished armament that the Naval Gun Factory was manufacturing until 1965 when it was converted into office space for the Defense Printing Service and the Naval Computer and Telecommunications Station. In 1982 Building 143 was used for supply storage. Presently it serves as office space and a warehouse.
- **Building 176.** Building 176 was constructed in 1919 for use as a general storehouse facility for the supplies and finished armaments produced by the Naval Gun Factory. This building is currently used as office space.
- **Building 197.** In 1904 the site of Building 197 was occupied by a storehouse for guns and mounts; closet and muster room; and storage bins for scrap metals. Several rail lines occupied the present location. Plans for the construction of future Building 197 in 1938 also show the existence of a fuel oil tank, which was removed in 1938. In 1940 all



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buildings and rail lines were removed. This building was constructed in 1938 when it originally served as a gun test and assembly shop mainly involved in the assembly, fitting up, and testing of major caliber mounts for large-scale naval ordnance. In 1963 the building was transferred to the GSA where it was used for offices by various government agencies. In 1989 the building was transferred back to the Navy and used for contractor staging. Currently the building is vacant.

- *Parking Lot East and South of Building 197.* Several small structures were located over the years on the site of what is now the parking area between Building 197 and Isaac Hull Avenue. The area includes several rail lines, a paint shop, and a timber shed. At the southern end, Slip 4 existed and minor small structures. This remains essentially the same until 1938. All slips have been filled, and a bulkhead and piers have been constructed. The remaining buildings were two magazines.
- *Building 198.* This was built in 1941 and served as the Yard Draft Office until 1950 when it was converted into waterfront office, a shop, and quarters. In 1982 it was used for administrative office space, and is currently occupied by the USO.
- *Building 201.* The building was completed in 1941 and was known as the maintenance shop, and still functions, with several offices located around the perimeter of the building on the second story.



## 4.0 ENVIRONMENTAL CONSEQUENCES

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## 4.0 Environmental Consequences

This section of the EIS presents a discussion of the potential environmental impacts associated with implementing the alternatives for the proposed action. Because all of the alternatives essentially involve the same group of buildings and area of the WNY, as well as an increase of 4,100 personnel, impacts for many resources will be similar. The section presents anticipated impacts to the natural environment; cultural resources; air quality; socioeconomic conditions; land use; transportation; noise; utilities and infrastructure.

### 4.1 Physical Environment

This section describes the potential impacts related to: topography, geology, and soils; water resources; floodplains; vegetation and wildlife; air quality; noise; infrastructure and utilities; and transportation.

#### 4.1.1 Topography, Geology, and Soils

The majority of the land area within the WNY has been altered through filling and grading, and nearly all surface areas are covered by buildings, roads, or parking areas. The reuse of buildings and or existing building sites as described in the alternatives will have little, if any, impact on topography, geology, or soils associated with the project site. Implementation of erosion and sediment controls associated with minor excavations for footings and utility line work will restrict soil from moving off site during construction activities. Special foundations and/or pilings will be used as required to offset soil support limitations. **Soils to be removed from the project site as a result of construction will be tested for site related contaminants and disposed of in accordance with applicable regulations. Clean fill will be added where necessary.**

#### 4.1.2 Water Resources

The existing project site is covered by hard surfaces such as buildings, parking lots, and roadways. A draft National Pollution Discharge Elimination System permit has been issued by the EPA for the Washington Navy Yard stormwater outfalls. As part of the NPDES permit requirements, deficiencies in stormwater conveyance structures throughout the installation will be corrected. The proposed alternatives would result in little change to the amount of hard surfaces within the project site, with the exception of proposed conversion of asphalt parking south of Building 197 to vegetation, which is expected to slightly decrease impermeable surfaces within the affected area. The alternatives include a requirement for both an erosion and sediment control plan and a stormwater management plan, which are developed and approved in coordination with local regulators. The erosion and sediment plan would use best management practices (BMPs), such as silt fencing and dust suppression, to contain soils from construction areas. Water associated with project related excavation will be tested and treated, as required, prior to discharge into the sanitary system (processing of excavation related water will require a pretreatment permit from the DC Water and Sewer Authority Pretreatment Office). Stormwater from the project site is affected by a high water table and tidal influences associated with the Anacostia River. To better control runoff, the project site is divided into an upper, middle,

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and lower drainage area. The upper and middle areas would include separate filter components. The parking structure would have its own filtering device. The lower portion of the project site would use contours and vegetation within the converted waterfront area to filter stormwater runoff. Precipitation within the lower drainage area surface would be diverted through vegetation prior to outfall discharge. The measures to be used in project related activities are expected to mitigate impact to water quality from the proposed development.

#### 4.1.3 Floodplains

As discussed in the background section of this document, alternate siting of the NAVSEA projects outside the WNY is not feasible. Potential building sites within the WNY were identified in conjunction with the facility Master Plan, which examined the assets, limitations, and constraints associated with the installation. The majority of the project site is within the 100-year floodplain, and design of the structural modifications and new construction meets the criteria of the National Flood Insurance Program (44 CFR 59 et seq.) to offset the effects of minor flooding. Sensitive/mission-critical equipment would be located above the anticipated 100-year flood level and additional measures, such as elevated floor levels and raised doorways, would be employed as needed to protect the structures and provide for the health and welfare of workers. **Existing structures associated with the project site have been constructed with masonry and/or concrete materials. Any new construction would use similar floodproof materials, as well as, design features to reduce the effects of flooding.**

#### 4.1.4 Vegetation and Wildlife

Implementation of the proposed action is not expected to impact vegetation or wildlife associated with the project site, including Federally listed threatened or endangered species. Landscaping in and around buildings and the conversion of the waterfront parking area to an urban park will, in a small way, provide additional habitat for resident wildlife.

#### 4.1.5 Air Quality

The CAA was passed to improve national air quality. The EPA identified six criteria pollutants considered unhealthy. They collected data, established clean air standards, identified areas of non-attainment, and deadlines for compliance with the standards. As a process for implementing these mandates, the states were tasked with developing their own state implementation plans (SIP) demonstrating how they would achieve these goals and maintain CAA standards following attainment. To ensure that Federal actions do not interfere with the SIP, the CAA required the EPA to develop both Transportation and General Conformity Rules. The General Conformity Rule establishes threshold levels for project emissions, as a guide for determining the level at which unregulated emissions could potentially affect the ability of the state to achieve and maintain the NAAQS. **Both the current location of NAVSEA and the WNY are within the same serious non-attainment area for ozone and maintenance area for carbon monoxide (CO).** Threshold levels are based on the severity of pollution within a non-attainment area. The threshold level for the ozone precursor pollutants volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) is 50 tons per year (tpy) each, and for CO the threshold level is 100 tpy.

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Emissions above the threshold required coordination with the state to work a proposed project into the SIP or required the proposed project's proponent to offset emissions as part of the project's requirements. Emissions below the threshold would not be expected to impact attainment of CAA/SIP goals and, therefore, would not be subject to the Conformity Rule.

Project-related emissions are identified in an Applicability Analysis, prepared in accordance with EPA and Navy guidance on the CAA and the General Conformity Rule. The results of the analysis are discussed below. Please refer to the Applicability Analysis in Appendix A for specific details concerning project emissions **and the results of MOBILE5a and CAL3QHC modeling analyses of CO hotspots associated with the proposed action.**

#### **4.1.5.1 Construction Activities**

Construction emissions for this action will be from renovation of existing buildings, demolition, and construction of new buildings. Emissions from construction activities are from the use of heavy equipment and delivery vehicles during site preparation and structure erection.

Heavy equipment emissions were estimated using emission rates from the EPA document *Compilation of Air Pollutant Emission Factors Volume II: Mobile Sources (AP-42)*. Emissions in pounds per hour of equipment use were averaged for nine classes of construction diesel equipment, multiplied by an assumed amount of equipment in use at the site and subsequently by an assumed number of operating hours per year. For calculation purposes, the following assumptions were used: 20 pieces of equipment would be in use daily, equipment would be in operation for eight hours a day, and the work year consisted of 240 days. It was also assumed that 20 delivery trips would be made daily. The method used to estimate delivery vehicle emissions is described below.

VOC emissions from construction paint use were estimated for both office space and garage space. The amount of VOC emissions was calculated based on the estimated amount of paint necessary to cover available wall and ceiling space, and to paint vehicle parking space lines. Project Plans call for an open-air office concept with individual spaces partitioned rather than individual offices with paintable walls. Only a small portion of the personnel (about 12 percent) will have individual offices. Additional wall space will be needed for closets, restrooms, conference rooms and the like. Based on these assumptions, it is estimated that the total paintable wall space will be approximately 1,007,000 square feet (ft<sup>2</sup>). This is assumed to be the same for all the alternatives.

The total paintable wall space was divided by a paint coverage in gallons per square feet (gal/ft<sup>2</sup>) to yield gallons of paint. The assumed VOC content per gallon of paint was then multiplied by the number of gallons used to produce the estimated amount of VOC emissions from painting. For calculation purposes, it was assumed that three coats of paint would be used (one primer and two finish), that water-based latex paint with a VOC content of 3 lbs. per gallon would be used, and that one gallon of paint would cover 400 ft<sup>2</sup>.

Paint use for parking garage space was calculated based on the amount of paint required to paint parking space lines. Since every two parking spaces usually share a common line, the amount of paint needed to paint two spaces was determined. An average parking space was assumed to be 9 ft wide by 19 ft long with 4 inch wide lines. This produced a total painted line area of approximately 25 ft<sup>2</sup> per every two parking spaces. The total number of parking spaces was

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divided by two and then multiplied by 25 ft<sup>2</sup> to obtain the total area of lines to be painted. The VOC emissions were calculated as described above for office space.

#### **4.1.5.2 Operations Emissions**

Operation emission sources can be broadly defined to fall within two categories: direct emissions (such as boilers or emergency generators); and indirect emissions (such as employee, delivery, and visitor vehicles). Direct emissions from facility operation are considered to be those emitted by the facility as part of its normal daily functions, primarily from the operation of facility boilers. Indirect emissions are considered to be those emissions generated by employee vehicle trips and facility delivery vehicles traveling on the site.

Heat for the affected buildings is already supplied by the WNY heat plant. The power source for the chillers to cool the buildings will be electrical, and no emissions are assumed for this source. **Past conversions of warehouse facilities to administrative space at the WNY have resulted in a reduced demand for steam generated heat, and implementation of the proposed action is not expected to exceed the permitted operating capacity of the base heat plant.** Therefore, emissions generated by the heat plant boilers are not expected to exceed those allowed by state operating permit. **Because permitted sources are not included in General Conformity emission analyses, no direct air emissions are identified for these sources.**

Daily vehicle emissions during operation were estimated for employee vehicle trips, on-site delivery vehicle travel, and on-site visitor vehicle travel. The vehicle emission rates used were based on rates calculated by the EPA approved MOBILE5a vehicle emissions model. MOBILE5a calculates an average fleet emission rate in grams of pollutant per vehicle mile traveled (g/VMT). The estimated VMT for the action was calculated by multiplying the estimated number of new trips for each type of vehicle trip by an estimated vehicle trip length.

**The density of development at the WNY limits the availability of parking which in turn limits the anticipated employee vehicle trips. Although a 1,000 space parking structure is being constructed at the eastern end of the base under BRAC 93, and although the preferred alternative under this proposed action includes a 1,500 space structure, the net gain is only 777 and 910 spaces respectively, or 1,678 total new parking spaces.**

**Parking must be managed on an installation wide basis to achieve adequate parking for tourists, contractors, handicapped, VIPs, ceremony attendees, and employees alike. For NAVSEA, as for other commands on base, the NCPC ratio of 1 parking space for every 3 employees applies (with the exception of an exemption for NAVSEA vanpool commuters agreed to by NCPC). One third of the 4,100 NAVSEA employees is 1,367. As 9% of NAVSEA personnel expect to vanpool, an additional 62 vehicles (4,100 X 9%=369/6 per van=62) would bring the total to 1,429 NAVSEA employee vehicles. This number would also be increased by 41 vehicles (4,100 X 1%=41) to account for through traffic that drop off employees and then continue their commute to another destination. Calculations for project related emissions are based on a total of 1,470 employee related vehicles.**

Since all the employees are relocating from Crystal City to the WNY and the two sites are in close proximity to one another, only the net change in distance traveled by the relocating employees was considered. This net change was measured as the road distance between the two sites, and for calculation purposes, was considered an increase in distance traveled. A review of

roadway mapping for the area indicates that there are approximately 8 road kilometers (km; 5 miles) between the two sites, or a round trip distance of 16 km (10 miles). The total number of daily delivery trips for the relocated facilities is estimated to be 20, while visitor trips are estimated to be 638. On-site travel for these trips was assumed to be one mile. **While evaporative emissions and those associated with hot/cold starts are not expected to change as a result of the proposed action, the redistribution of these emissions may need to be considered by the appropriate state/district agencies**

The total number of vehicle trips was multiplied by the trip distance in miles to obtain the daily VMT. The daily VMT was then multiplied by the vehicle pollutant emission rate in g/VMT and subsequently multiplied by 240 working days per year to obtain an annual amount of emissions per year. These annual emissions were converted to tons per year (tpy), summed, and compared to the *de minimis* criteria.

#### **4.1.5.3 Analysis Findings**

The results of the emissions analysis are summarized in Table 4-1. A complete listing of calculation estimates and results is contained in Appendix A. These results are annual emission levels and result primarily from the operation of motor vehicles. During the first three years, emissions are expected to be from construction activities. As the project nears completion, construction-related emissions will diminish and operation emissions gradually increase. While the full amount of both construction- and operation-related emissions could not occur in the same year, the total of both is still below *de minimis* levels.

Construction emissions are related to the operation of heavy equipment, delivery vehicles, and the use of paints. Based on procedures established in the Conformity regulations and other EPA and Navy guidance, it is estimated that no more than 12.2 tpy of CO, 14.5 tpy of VOC and 35.2 tpy of NO<sub>x</sub> will be generated through construction-related activities associated with the proposed action.

Operation emissions associated with the BRAC relocation would be generated by employee trips, delivery vehicle travel, and visitor vehicle travel. These emissions were identified as 49.2 tpy of CO, 6.3 tpy of VOC, and 8.6 tpy of NO<sub>x</sub>, and are based on annual distance traveled and number of vehicles used.

The annual rate of emissions for both construction and operation is well below threshold levels established in the Conformity regulations and, therefore, is not expected to affect attainment of SIP goals or regional air quality significantly.

**Table 4-1: Summary of Annual Emissions and Comparison to *de minimis* Values**

<b>Pollutant</b>	<b>Construction (tpy)</b>	<b>Operation (tpy)</b>	<b>De Minimis (tpy)</b>
CO	12.2	49.2	100
VOC	14.5	6.3	50
NO <sub>x</sub>	35.2	8.6	50

Source: Louis Berger & Associates, Inc. 1996

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#### 4.1.6 Noise

Implementation of the proposed action would involve construction and renovation at the WNY. Once operational, the mandated relocations would result in the addition of 4,100 personnel and an increase of 1,470 employee vehicles to the WNY. Potential noise impacts are expected to be generated by construction/renovation activities (including noise generated from construction equipment) and traffic during peak commuting hours. Each is considered separately for potential effects. Anticipated noise levels associated with the proposed action were compared with the FHWA (for areas exterior to the WNY), Department of the Navy (for areas within the installation), and EPA noise standards to assess the potential for impacts.

The EPA has identified the maximum noise range for commercial building construction as 89 dB (measured as  $L_{eq}$ ). The construction activities are temporary and are anticipated to have no significant impacts on surrounding land use because noise levels from such sources attenuate quickly with distance. Potential construction-related  $L_{eq}$  noise levels of 85 dBA to 90 dBA at 50 feet (15.2 meters) from the source would quickly diminish to less than 62 dBA at 2,000 feet (609.6 meters) from the source. With respect to any grading at the site, assuming bulldozer and dump truck delivery activity only, the  $L_{eq}$  levels would be approximately 85 dBA at 50 feet (15.2 meters). The noise levels would fade to approximately 67 dBA at 800 feet (243.8 meters). These noise levels do not exceed EPA limits for construction, and they do not conflict with the Department of the Navy noise standard of 84 dBA for eight hours of constant use. Therefore, no significant impacts from construction noise are anticipated to the human environment. Noise associated with the reconstruction of any buildings would have a negligible effect on wildlife since the WNY is in a developed urban area providing minimal wildlife habitat and because the noise source would be both temporary and similar to other existing background sounds.

The existing traffic noise levels are expected to increase with the addition of the 4,100 NAVSEA personnel and an increase in 1,470 employee vehicles to the WNY. Increased traffic noise is expected to occur during the a.m. and p.m. peak commuting period (Monday to Friday). A gradual increase and decrease in noise levels would coincide with peaks in traffic flows and other human activity within the surrounding area. Limited parking will restrict the number of new commuter vehicles to the WNY.

Because the maximum  $L_{eq}$  levels measured at the interior monitoring sites fall far below the Navy threshold criteria of 84 dB exposure for eight hours, it is not anticipated that this threshold will be exceeded within the WNY. Some of the noise levels measured at exterior monitoring sites during peak a.m. and p.m. commuting periods were found to exceed the FHWA roadway noise abatement criteria of 72 dBA for land uses consistent with Activity Category C. Those noise measurements approaching or exceeding the FHWA noise standard of 72 dBA are directly associated with the passage of large trucks and buses. These intermittent sources of noise are short in duration (between 1 to 5 seconds), and typical in character for an active urban roadway. These noise measurements were taken from monitoring sites located immediately adjacent to M Street, and are not representative of the noise levels that would be experienced by the nearest potential local residential and commercial receptors, located on the north side of M Street and southern portions of connecting streets (6th, 7th, 8th, 9th, and 10th Streets). As noise levels attenuate quickly with distance, the  $L_{eq}$  levels near potential local receptors would be correspondingly less than those  $L_{eq}$  measured at the external monitoring sites. Therefore, traffic-related noise increase is not anticipated to result in significant impacts or affect the hearing of the nearest potential residential and commercial receptors within the WNY vicinity.



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#### **4.1.7 Infrastructure and Utilities**

The utility systems at the WNY are adequate to support the increase of 4,100 personnel. The new dual fuel boilers have sufficient capacity to service the proposed new/renovated administrative facilities. Based on previous experience, the Navy anticipates that conversion of warehouse buildings to administrative offices will reduce steam demand loads. Further, it is anticipated that future development on the adjacent GSA property would not require steam from the WNY system. Minor system component upgrades and connector line reconfigurations would be required to accommodate changes in building use. The addition of substations and distributions lines for electrical and telephone support will be required. A chiller plant would be installed in Building 116 and connected to buildings associated with the proposed action by distribution lines to provide air conditioning. An acceptable stormwater management plan would be developed and implemented as required.

An increase in support services will be required to provide maintenance and repair services for the new buildings. This could result in new hires and/or contracted services. Relocated personnel are expected to generate a local requirement for noontime food services, office supplies/products, transportation services, and personnel services (such as gas stations, drug/convenience store, dry cleaners, gift shop, etc.).

#### **4.1.8 Transportation**

The analysis of effects to transportation considers increases in personnel at the WNY associated with both the 1993 and 1995 BRAC relocation combined with existing population levels, as well as projected background traffic levels. Daytime employee levels at the WNY will be approximately 10,800 personnel following the implementation of the BRAC relocations. A Transportation Management Plan (TMP) was developed in conjunction with planned actions to accommodate BRAC relocated personnel at the WNY (see Appendix B). The information presented in the EIS is a summary of detailed investigations and analyses, conducted in support of the TMP.

##### **4.8.1.1 Traffic**

The regional highway network serving the WNY and other waterfront developments in the area is constrained due to the amount of commuter traffic utilizing this transportation system. The regional highway network consists of South Capitol Street, Pennsylvania Avenue, the Southeast Freeway (I-395), and the Anacostia Freeway (I-295). These roadways are constrained by the limited number of lanes crossing the Anacostia River. The available bridges are the Frederick Douglas Memorial Bridge, the 11th Street Bridge, and the John Phillip Sousa Bridge. Studies have shown that the traffic volumes on these regional highways have remained constant or increased only slightly over the past decade. Due to the fact that these roadways are currently operating at or near capacity, it is anticipated that there will be very little additional traffic volume growth during the peak hours in the future. For these reasons, the WNY will have limited impact on the peak hour traffic volumes on the regional highway network.

The number of parking spaces designated for employees is the basis for predicting increases in traffic volume and the resulting effects to localized traffic. A TMP Update was prepared to evaluate the projected traffic impacts anticipated to result from the proposed action. An estimate of inbound and outbound vehicles was determined in the TMP based on the projected parking accumulation. The BRAC actions will relocate a total of 5,400 employees to the WNY (4,100

from BRAC 95 and 1,300 from BRAC 93), bringing the total WNY employee population to 10,800. As part of the BRAC actions, the existing parking supply of 3,586 will be increased to 5,273 parking spaces to accommodate the projected parking demand of the increased WNY population and visitors to the WNY. The limitation on the number of employee parking spaces established by the WNY will curb the number of vehicular trips attracted to the WNY. As a result, the modal distribution of the total employee population of 10,800 would shift from single occupancy vehicles (SOVs) to increased carpooling, vanpooling, and transit use. This limited parking supply would also affect the modal distribution of visitors to the WNY. NAVSEA alone currently receives 2,000 visitors daily, in addition to base museums and special events visitors.

The projected trip generation will be 1,371 vehicles inbound and 317 vehicles outbound during the roadway network AM peak hour. This will be an increase of approximately 584 trips from existing conditions for the AM peak hour. Similarly, during the PM peak hour, the trip generation is 177 vehicles inbound and 1,284 vehicles outbound, thus resulting in an increase of 275 trips from existing PM peak hour conditions. The proposed opening of the Isaac Hull Avenue access point on M Street will help to redistribute these trips more by providing a third entrance along M Street. Consequently, more inbound and outbound vehicles can be accommodated during the roadway network peak hours.

The projected total future traffic volumes for the year 2001 includes the background traffic, the site-generated WNY traffic, and projected contract employee traffic. In order to evaluate the impact of the total future traffic, a capacity analysis was undertaken. The level of service results from the capacity analysis are shown in Table 4-2. At signalized intersections, the same cycle length was maintained, but signal timings were optimized according to the new demand distribution.

**Table 4-2: Projected 2001 Peak Hour Intersection Levels of Service (With Mitigation)**

Intersections	Traffic Control	LEVEL OF SERVICE (measured in seconds)	
		a.m. Peak Hour	p.m. Peak Hour
M St. @ Isaac Hull Ave.	2-phase signal	A (1.5)	B (11.0)
M St. @ 7th St.	TWSC	F (SB: 49.3)	F (SB: 521.2)
M St. @ 8th St.	2-phase signal	B (8.2)	B (6.8)
M St. @ 9th St./Parsons Ave.	2-phase signal	B (8.9)	B (10.8)
M St. @ 11th St.	3-phase signal	D (30.7)	D (28.1)
N St. @ 11th St.	2-phase signal	B (10.8)	C (20.6)
Isaac Hull Ave. @ Tingey St.	AWSC	A (1.7)	A (1.5)
South Capitol St. @ M St.	3-phase signal	F (*)	F (*)

TWSC: Two-Way Stop Control; AWSC: All-Way Stop Control

LOS: See Appendix C for level-of-service definition.; \*: Volumes exceed capacity of the intersection.

SB: Southbound Approach

Source: Gorove Slade, 1996

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The only intersection expected to experience a decrease in the Level of Service designation is the signalized intersection of 11th Street SE and M Street SE. Although this intersection decreases in LOS from LOS C to LOS D, it still operates at an acceptable LOS. The queue of vehicles exiting from the 11th Street SE WNY gate may be long since most vehicles turn right onto the southbound I-295 on-ramp. It is probable that some drivers will use the alternate gate of Parsons Avenue and M Street SE rather than experience undue delays at the 11th Street SE gate. Such alternate access of the southbound I-295 on-ramp, via the M Street SE/Parsons Street Gate is relatively easy via a right turn onto M Street SE and then a right turn from M Street SE onto 11th Street SE. In addition, there is a sufficient reserve of capacity at both signalized intersections of M Street and Parsons Avenue and of M Street and 11th Street to easily accommodate additional right-turning vehicles.

All but two of the major intersections in the vicinity of the proposed action are expected to operate at LOS D or better. These exceptions are 7th and M Street SE, and South Capitol and M Street SE. These intersections operate at a poor LOS due to a high volume of commuter traffic, and will continue to operate at the same LOS regardless of implementing the alternatives. The additional traffic along M Street SE is expected to increase the delay time for southbound 7th Street traffic making left-turn movements onto M Street SE, and drivers will most likely use alternate routes. It is not advisable to signalize this intersection as it would induce traffic along 7th Street.

#### **4.1.8.2 Parking**

Although an increase of 5,400 personnel at the WNY will result from the BRAC relocations, only 1,687 additional parking spaces will be developed. **When the BRAC 93 and BRAC 95 parking spaces are added to the existing parking of 3,586 spaces, a total of 5,273 spaces would be available at the WNY for 10,800 employees, visitors, residents, and government-owned vehicles.** Limited parking at the WNY is a major component in mitigating the potential effects of traffic-related impacts associated with this action and compliance with regional planning efforts. Proposed allocation of available parking will coincide with the NCPC 3:1 employee to parking space ratio, while attempting to meet the high demand for visitor parking at the Installation. Based on the current modal distribution, the on-site parking supply is adequate with some reserve for additional demand. **Foth NAVSEA and WNY personnel currently utilize car/vanpools programs and mass transit to commute to work, and it is expected that these practices will continue to be important modes of transportation following the NAVSEA relocation.** In addition, a limited amount of parking is available in the communities that surround the WNY. All of these factors are anticipated to minimize the potential for parking-related impacts

## **4.2 Cultural Resources**

The purpose of this section is to assess the effect of the proposed NAVSEA relocation on archaeological resources and historic architectural resources. As part of the EIS process, the Navy has sponsored a separate Cultural Resource Assessment of Effect study, as required by Section 106 of the National Historic Preservation Act, as amended. The CRAE report (Louis Berger & Associates, Inc. et al. 1996) is incorporated by reference. The findings from the cultural resources study of the alternatives are discussed in detail in the following sections and are summarized in Table 4-3.

**Table 4-3: Alternative Comparison Matrix**

<b>Alternative</b>	<b>Archaeological Resources</b>	<b>Historic Structures</b>
1	Impact to possible early nineteenth-century waterfront features and landfill deposits east of Building 197. Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.	High level of effect on the historic district due to the extensive demolition of contributing resources and the major new construction.
2	Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.	Medium level of effect on the historic district due to the new construction and interior alterations to historic buildings.
3	Impact to possible early nineteenth-century waterfront features and landfill deposits east of Building 197. Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.	High level of effect on the historic district due to the extensive demolition of contributing resources and the major new construction.
4	Impact to possible early nineteenth-century waterfront features and landfill deposits east of Building 197. Impact to possible resources associated with the early shipbuilding and repair period, especially near Buildings 198, 142, and 201.	High level of effect on the historic district due to the extensive demolition of contributing resources and the major new construction.

Source: Louis Berger & Associates, Inc. 1996

The Navy has negotiated a Memorandum of Agreement (MOA) governing the treatment of cultural resources at the WNY with the District of Columbia Historic Preservation Office (HPO) and other interested parties. Mitigation measures have been established to mitigate the potential effects of the proposed action on historic and cultural resources. Mitigation actions are stipulated in the MOA, which has been approved and signed by both the HPO and the Advisory Council on Historic Preservation (ACHP). The mitigation measures, as stipulated in the MOA, provide for:

1. Additional architectural survey in the WNY to supplement the original 1976 NHL Nomination. This will include an intensive level architectural survey of the buildings between the eastern boundary of the NHL (Parsons Avenue) and the eastern boundary (11th Street SE), which will determine whether an eastward expansion of the NHL boundary is appropriate. If such an expansion of the NHL is appropriate, contributing historic structures will be identified within the expanded historic district boundary.
2. Recordation of all contributing buildings that will be substantially altered or destroyed by the NAVSEA project, according to the standards of the Historic American Buildings Survey / Historic American Engineering Record (HABS/HAER).
3. Submission of design drawings of the NAVSEA project to the HPO and the ACHP for review, and response by the Navy, in writing, to any resulting review comments.

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4. Retention of an archaeologist to monitor ground disturbing activities associated with the NAVSEA project, at a level agreed to in consultation with the HPO.
  5. Preparation of a public interpretation program pertaining to the history and past land uses of the NAVSEA project area.

The full text of the MOA is attached to this EIS as Appendix D.

#### 4.2.1 Architectural Resources

For historic architectural resources, the CRAE methodology required updating and amplification of the National Historic Landmark nomination for the Washington Navy Yard, a review of the history and significance of the WNY, and the development of detailed information on the extant structures and archaeological resources within the Area of Potential Effect.

Documentation and evaluation related to historic structures was aimed at, first, identifying an area of potential effect; second, identifying resources within the area of potential effect that are contributing elements to the historic district (and thus eligible for listing in the National Register); and, third, at determining how the NAVSEA project would affect the qualifying structures. The survey involved a review of existing historical documentation, extensive primary source research, and field investigation. The survey resulted in a finding that a majority of the buildings in the area of potential effect should be considered contributing resources to the existing historic district.

As a result of the historic structures survey, a total of 24 buildings in the area of potential effect were considered to be contributing elements to the historic district. These include: Buildings 21, 22, 28, 33, 36, 37, 39, 71, 73, 74, 104, 105, 106, 109, 111, 112, 116, 118, 142, 143, 176, 197, 198, and 201. Eight buildings were considered to be noncontributing elements to the historic district. They include Buildings 199, 204, 241, 273, 292, 378, 403, and 404. The specific period of significance used to judge contributing and noncontributing status was 1799 to 1946. For the purposes of this project, it was clear that the significance of the district extended throughout the World War II period.

To determine the effect of the NAVSEA relocation, the Criteria of Effect were applied to the contributing elements to the historic district. The "Criteria of Effect" are defined as follows: "An undertaking has an 'effect' on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register. For the purpose of determining effect, alteration to features of the property's location, setting, or use may be relevant depending on a property's significant characteristics" (36 CFR 800.9).

The Section 106 process requires that after it has been determined that there is an effect, the effect is evaluated to determine whether it is "adverse" or "not adverse." An undertaking is considered to have an "adverse effect" when "the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (36 CFR 800.9). Adverse effects on historic properties include, but are not limited to: (1) physical destruction, damage, or alteration of all or part of the property; (2) isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the National Register; (3) introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting; (4) neglect of a property resulting in its deterioration or destruction; and (5) transfer, lease, or sale of the property.

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Based on the demolition of contributing resources, and other factors, it was concluded that Alternatives 1, 3, and 4 would all result in a high level of adverse effect to the historic district. It was concluded that Alternative 2 would result in a moderate adverse effect to the historic district.

Alternative 1 would result in a high level of effect on the WNY Historic District, based on the amount of demolition called for and the loss of World War I- and World War II-era buildings. This alternative would result in both direct adverse effects to historic resources and indirect effects. Direct adverse effects associated with Alternative 1 include: demolition of Building 143; demolition of Building 28; demolition of Building 201; demolition of Building 142/198; renovation of Building 104; renovation of Building 176; and renovation of, and addition to, Building 197.

Overall, Alternative 1 would significantly affect the largest concentration of World War I-era buildings within the original district, i.e., the Building 143/28/176 complex. Although there are large World War I-era buildings in the WNY Annex (i.e., the Southeast Federal Center), there has been insufficient historical documentation of these buildings to be able to compare their significance with that of Buildings 143, 28, and 176. The 1910s-era expansion at the WNY was one of its largest expansions. By demolishing this group of buildings, one important era of construction at the WNY would be significantly impacted. The group of buildings planned for demolition/alteration also constitute the major area of the WNY dedicated to supply. In addition, other 20th-century buildings that contribute to the period of significance and the overall historic development of the WNY would be demolished and/or altered. Among these are buildings that relate to the WNY's World War II buildup and the industrial function of the site.

Alternative 1 would also potentially alter the visual character of the district. The buildings slated for demolition under this alternative represent a dense collection of tightly spaced or attached brick and concrete buildings. Visually, the buildings represent the evolution of industrial design from roughly 1901 to 1942. In general, these are long, cavernous structures with an east-west orientation. It is clear that the new construction would significantly alter the historical character of this area of the historic district and would result in an adverse effect to the district.

Alternative 2 differs from Alternative 1 in that the Building 143/28/176/201 grouping would be renovated rather than demolished, and a large addition to Building 197 to house a 12-level parking garage would be constructed. (no alteration to Buildings 198/142). Alternative 2 would result in a medium level of effect on the WNY Historic District, based on the construction of a large new parking structure to the east of Building 197, and various interior alterations to existing historic buildings. Alternative 2 would result mostly in indirect effects (i.e., visual effects) to the historic district, although there would also be some impact to the interior of contributing elements to the historic district. Direct adverse effects include: renovation of Building 28/143/176; renovation of Building 201; renovation of Building 197; and renovation of Building 104.

The overall effect of Alternative 2 would also include alteration of the visual character of the historic district. Although the plans for the new parking facility to be located to the east of Building 197 are only preliminary, it is clear that in order to accommodate the necessary number of cars, the new facility would be 12 stories high and would run nearly the length of the block from Tingey Street to Sicard Street. This would introduce a large, heavily intrusive, new noncontributing element to the district. Given the size of the building and its placement, it would have an adverse effect on the surrounding buildings in the historic district.



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Impacts associated with Alternative 3 are similar to those identified in Alternative 1. This alternative calls for the demolition of a number of the buildings located between Patterson and Isaac Hull avenues south of Tingey Street. However, under this alternative, Buildings 143 and 176 would be demolished instead of renovated, and Building 197 would be renovated for use as a parking structure. Alternative 3 would result in a high level of effect on the WNY Historic District, due to the extensive demolition of contributing resources, the major new construction, and the loss of a significant number of World War I-era buildings, as well as a lesser number of resources from other eras. Alternative 3 would result in both direct adverse effects to historic resources and indirect effects. Direct adverse effects include the following: demolition of Building 143; demolition of Building 28; demolition of Building 201; demolition of Building 142/198; demolition of Building 176; renovation of Building 104; renovation of Building 73; and renovation of Building 197.

Overall, Alternative 3 would reduce the largest concentration of World War I-era buildings within the original district, i.e., the Building 143/28/176 complex. Although there are large World War I-era buildings in the WNY Annex (i.e., the Southeast Federal Center), there has been insufficient historical documentation of these buildings to be able to compare their significance with that of Buildings 143, 28, and 176. In addition, other 20th-century buildings that contribute to the period of significance and overall historic development of the Washington Navy Yard would be demolished and/or altered. Among these are buildings that relate to the Washington Navy Yard's World War II buildup and the industrial function of the site.

Alternative 3 would alter the visual character of the historic district. Plans for the large new structure on the site of Buildings 143/28/176/201/198/142 under this alternative are undeveloped. For this reason, many issues such as the compatibility of the building's massing and materials cannot be assessed at this point. It is clear, however, that under this alternative a total of six separate buildings would be replaced with a single structure of massive size and footprint. Such a structure would be inconsistent with historic building size and bulk in the section of the historic district east of Isaac Hull Avenue. In addition, there would be significant changes in the architectural design of this area. The buildings slated for demolition represent a dense collection of tightly spaced or attached brick and concrete buildings. Most are long, cavernous structures with an east-west orientation. They would be replaced with a modern building housing office space. Given its size, it is clear that the new construction would significantly alter the historical character of this area of the historic district and would result in an adverse effect to the district.

Alternative 4 is very similar to Alternative 3, and as such, the effects of the alternative are largely the same. Alternative 4 differs from Alternative 3 only in that an addition to Building 197 would be constructed (similar to Alternative 1), and Buildings 104 and 73 would not be renovated. In addition, under Alternative 4, elevated pedestrian walkways would be constructed above Isaac Hull Avenue. Because Alternative 4 calls for the demolition of the entire Buildings 143/28/176/201/198/142 grouping, it would result in a high level of effect on the WNY Historic District. In addition, the major new construction on the east side of Isaac Hull Avenue, and the loss of a significant number of World War I-era buildings, would have an adverse effect on the historic district. Alternative 4 would result in both direct adverse effects to historic resources and indirect effects. Direct adverse effects include the demolition of Buildings 143, 28, 201, 198/142, and 201 (see Alternative 3), and renovation of, and addition to, Building 197.

Similar to Alternative 3, Alternative 4 would reduce the largest concentration of World War I-era buildings within the original district, i.e., the Building 143/28/176 complex. Alternative 4 would



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also alter the visual character of the historic district. Plans for the large new structure on the site of Buildings 143/28/176/201/198/142 under this alternative have not been developed. For this reason, many issues such as the compatibility of the building's massing and materials cannot be assessed at this point. It is clear, however, that under this alternative a total of six separate buildings would be replaced with a single structure of massive size and footprint. Such a structure would be inconsistent with historic building size and bulk in the section of the historic district east of Isaac Hull Avenue. Given the sheer size of the new building, this alternative would clearly have an adverse effect on the historic district. In addition, the planned pedestrian walkways connecting the addition to Building 197 and the new building to be constructed on the site of Buildings 143/28/176/201/198/142 would also change the visual character of the district and create an adverse effect.

Certain changes to the historic district would be common under all alternatives. These include Alterations to Building 116 and 118 and Alterations to Structure 273 (Coal Pit/Oil Tanks). Under all alternatives, a chiller plant would be installed in Building 116. There is presently insufficient information to judge whether this installation would have an adverse effect on the building(s). Under all of the alternatives, portions of the coal storage pit located south of Building 116 would be removed. Constructed in the 1940s as a storage area for coal which was moved to Building 116 via a coal conveyor (now demolished), the structure no longer retains the essential components of integrity and is not a contributing element to the historic district. Its removal would not adversely affect the district. The two oil tanks on the location, one of which may be moved, are of recent construction and are not contributing elements to the historic district.

Although plans relating to the landscaping have not been finalized, they include changes to roadways, creation of greenspace/landscaping and utility and infrastructure modifications. A complete analysis of the effect of these changes is not possible at this time. The existing Isaac Hull gate, which would be impacted under all of the alternatives, is of recent construction and is not a contributing element to the historic district.

#### **4.2.2 Archaeological Resources**

For archaeological resources, the methodology used in the CRAE study focused on archival research, including a review of site files, cartographic materials, and previous studies of the Washington Navy Yard and surrounding area. A field inspection was also undertaken to assess the degree of previous landscape alteration and potential for preservation of significant archaeological resources. Most of the area of potential effect is within an area of made land, so that there is little potential for resources that pre-date the establishment of the WNY. For the most part, the area of potential effect consists of landfill deposited in the nineteenth and early twentieth centuries, and it is expected that the site's archaeological record would contain building foundations, floors, utilities, waterfront structures, landfill deposits, and industrial refuse associated with the historic operation of the WNY. Effects to archaeological resources cannot be specified with a high degree of certainty at this juncture, as the CRAE study focused primarily on documentary research. The identification of archaeological resources normally requires subsurface field survey, particularly in industrialized urban areas where extensive landfilling activities have occurred, such as the WNY.

Because the present study did not include subsurface field survey to identify archaeological resources, the assessment of the effect of the proposed NAVSEA relocation project on archaeological resources must rely on a number of assumptions. First, it is assumed that the

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proposed undertaking may have an effect on archaeological resources in areas of new construction or where demolition of existing structures may occur. Second, it is assumed that renovation or adaptive reuse of existing structures would have no effect on archaeological resources. Finally, it is assumed that construction of new subsurface utility lines might also have an effect on archaeological resources. At this juncture, the alternatives have been developed only in general concept form, which is sufficient to identify areas of new construction, building demolition, and adaptive reuse or renovation of existing structures. However, the location of new subsurface utility lines is not known, and the extent of ground disturbance associated with new construction or demolition is not known.

The principal area of new construction is immediately to the east of Building 197. Much of this area consists of fills deposited during the late nineteenth and twentieth centuries, and as such would have relatively little potential for significant archaeological resources. However, the 1828 shoreline is believed to be immediately to the west of Isaac Hull Avenue, where there would be some potential for early 19th-century waterfront features and landfill deposits, which could be significant. Other areas of new construction are located between Isaac Hull and Patterson avenues. Demolition of existing structures is proposed under Alternatives 1, 2, and 4. Building demolition under these alternatives would involve the area now occupied by Buildings 143, 28, 176, 201, 198, and 142. Under Alternative 1, Building 176 would not be demolished, so that it should be viewed as having a less severe effect on potential archaeological resources in this area. All of this area was filled by 1828 and, as such, it has the potential to contain archaeological resources associated with the WNY's early shipbuilding and repair period (circa 1799-1840). Intact resources associated with this period should be viewed as having the highest archaeological significance in the WNY. The southern portion of this area, occupied by Buildings 198, 142, and the southern half of Building 201, are within the narrow peninsula that projected into St. Thomas Bay from the east, with a slip at its end. As the slip appears on the earliest maps of the WNY, it has a direct association with the WNY's initial military mission, i.e., shipbuilding and repair.

No effect to archaeological resources associated with the Native American Cultures (before 1730) or Trading and Plantation Economy (1650-1800) historic contexts (Historic Preservation Division 1985, 1991) would be expected, based on the current conceptual plans. Potential resources associated with these contexts would be expected only in the sections of the area of potential effect that are within the original shoreline area. These areas are located in the northeastern portion of the area of potential effect, near Buildings 21, 22, 105, and 112. None of these buildings are scheduled for demolition under any of the alternatives; therefore, no effect to archaeological resources is expected in this area.

### **4.3 Socioeconomic Conditions**

This section describes the potential socioeconomic impacts related to: population; services; land use, zoning, plans, and policies; and environmental justice.

#### **4.3.1 Population**

The relocation of Navy personnel associated with the proposed action would result in an increase in daytime on-site population at the WNY. The increase of 4,100 employees represents approximately a 76 percent increase from the current WNY daytime population. No increase in the WNY's on-site resident population would result from the proposed action. NAVSEA

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personnel currently work in Crystal City in Arlington County, Virginia, approximately five miles away. Given the close proximity of the WNY to Crystal City, it is unlikely that NAVSEA personnel would change their residence as a result of the relocation. However, it is likely that some personnel will look for alternative employment in Northern Virginia. The subsequent vacancies are anticipated to create employment opportunities for local residents. However, the net effect of the relocation will not result in significant changes in population at the project site.

#### **4.3.2 Services**

No significant adverse impacts to local services are anticipated as a result of the proposed action. Minor increases in local employment and business revenues may result from the associated construction activities. These increases, however, would be short-term for the duration of construction activities. Though not part of this BRAC action, the retail and community services to be added to the WNY to serve the increased on-site population are expected to benefit the local economy through the creation of employment opportunities.

Increases in the daytime population of the WNY are expected to result in an increase in the demand for support services including office equipment maintenance and repair, office cleaning, office supplies, convenience stores, gasoline, and dry cleaning. The Navy has initiated plans to expand the number of services at the WNY available to employees, particularly food services. Expansion of off-site retail and service amenities is also planned as part of the future development of the Southeast Federal Center. Linkage to this adjacent development, along the Tingey Street corridor, is envisioned by the Navy to provide convenient access for Navy employees and allow for the shared use of the planned amenities. Likewise, the increase in personnel is expected to help support existing and future off-site service sector community businesses near the WNY. In an effort to promote local private service sector business and employment opportunities at and near the WNY, the Navy is working with the U.S. Small Business Administration (SBA). This collaborative effort included the Navy's sponsorship of a day-long workshop at the WNY to work with representatives of the local community interested in initiating business opportunities at or near the installation. The Navy is committed to continuing to work with the SBA and the local community to facilitate the establishment of businesses in and near the WNY.

#### **4.3.3 Land Use, Zoning, Plans, and Policies**

Elements of Federal, state, and local plans, policies, and controls include goals, policies, and objectives that relate to the WNY and its planned development. The Navy is working with District planners in the implementation of the proposed action.

One of the NCPC responsibilities is to ensure that the NEPA process is applied appropriately to Federal projects in the National Capital Region (44 FR 64923 as amended). The Commission's area of jurisdiction is the National Capital Region, which is defined by the National Capital Planning Act of 1952, as amended, as the District of Columbia; Montgomery and Prince George's Counties in Maryland; and Arlington, Fairfax, and Loudoun Counties in Virginia; and by the outer boundaries of the combined areas of these counties.

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Twelve members sit on the Commission, representing a cross-section of the various interests involved in the planning for the National Capital. There are five appointed and seven ex-officio members. Three members are appointed by the President.

The Commission has three major functions in the National Capital Region: plan and program preparation, review of planning-related matters, and representation of Federal planning interest through intergovernmental liaison. In carrying out these functions, NCPC works through Federal departments and agencies, state and regional agencies and all local jurisdictions. Commission approval is required for Federal public buildings located within the District of Columbia. The action addressed by this EIS will require such approval. NCPC also has responsibility for the preparation of the Comprehensive Plan for the National Capital.

Federal projects such as the one addressed by this document require the lead agency, in this case the Department of the Navy, to consult with the Commission at the earliest possible time with respect to a plan for development or a project requiring the Commission review and approval as set forth in NCPC procedures and to permit the Commission to participate with it in determining the appropriate environmental document for such development or project. It should also be noted that the Commission acts to:

- Approve the location, height, bulk, number of stories, and size of Federal Public Buildings in the District of Columbia and the provisions for open space in and around the same, pursuant to section 16 of the Zoning Act (DC Code, 1981 edition, sec. 5-432); and,
- Approve transfers of jurisdiction over properties within the District of Columbia owned by the United States or the District among or between Federal and District Authorities, pursuant to Section 1 of the Act of May 20, 1932, 47 Stat. 161, as amended (40 U.S.C. 122; DC Code, 1981 edition, sec. 8-111) except where such transfers of jurisdiction conform to master plans or site and building plans approved by the Commission pursuant to Section 5(a) of the Planning Act or to urban renewal plans and modifications thereof adopted by the Commission and approved by the Council pursuant to Sections 6 and 12 of the Redevelopment Act.

Applicable land use and development plans, policies, and controls that relate to the proposed action are listed below:

#### ***Comprehensive Plan for the National Capital***

The Comprehensive Plan for the National Capital is a statement of goals, objectives and planning policies for the growth and development of the National Capital Region as defined pursuant to the National Capital Planning Act of 1952. The Plan consists of Federal and District of Columbia elements. The Federal elements contain recommendations directed at Federal lands and the Federal interests in the Region. There are eight Federal elements: Federal Goals for the National Capital; Foreign Missions and International Organizations; Federal Environment; Federal Employment; Federal Facilities; Parks, Open Space and Natural Features; Visitors to the National Capital; and Presentation and Natural Features.

Federal Goals for the National Capital as published by the NCPC are summarized as follows:

- Foster a capital worthy of a great nation.

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- Provide for the efficient and effective operation of the Federal establishment which contributes to the general order and beauty of the National Capital.
  - Deploy the Federal work force in a manner that enhances the efficiency and productivity of the Federal agencies and strengthens economic development and expands employment opportunities in the National Capital Region.
  - Facilitate the efficient exercise and satisfactory performance of diplomatic and international functions in harmony with the planned development of the National Capital.
  - Present the important historic features of the National Capital while permitting new development which is respectful of these features.
  - Conserve the natural features and resources of the National Capital and enhance cultural and recreational opportunities and the open space of the Region.
  - Enhance the quality of the environment.
  - Conserve energy resources.
  - Promote adequate systems for the transportation of residents, employees, visitors, and goods, to, from, and within the National Capital Region.
  - Accommodate visitors to the National Capital in an efficient, attractive, and informative manner.
  - Promote intergovernmental cooperation and public participation in Federal planning in the National Capital.

#### ***Anacostia Waterfront Master Plan***

The Anacostia Waterfront Master Plan focuses on the distribution and intensity of land uses in its study area, the west bank of the Anacostia River from the Washington Channel along M Street to the 11th Street Bridge. The WNY is part of the Anacostia Waterfront Master Plan as an institutional/military function, which contributes in the effort to develop the area into a thriving community of office and residential space. This effort for development would provide an abundance of amenities and contribute to the economic growth of this prime area south of the nation's capitol along the waterfront. The mandated relocation of employees to the WNY enhances the efforts of this plan by increasing the employment population in the area. The proposed action results in temporary employment during the renovation and construction phases.

#### ***Anacostia Waterfront Master Plan Phase II Report***

Complementary to the Anacostia Waterfront Master Plan, the Phase II Report focuses on capital improvements and implementation strategies for the transportation and infrastructure systems in the study area. Development of the area cannot be successful without the realization that an area poised for such a significant amount of development and increase in transit service must be prepared and able to carry the weight of its development through the future. The mandated relocations of employees to the WNY would increase the need for transit services in the area because of the dependence of these additional employees on transportation and infrastructure systems.

#### ***Buzzard Point/Near Southeast Vision 2020***

Similar to the Anacostia Waterfront Master Plan efforts, Buzzard Point/Near Southeast Vision 2020 provides a framework for reshaping the Buzzard Point/Near Southeast area into a dynamic new community of mixed use in the District of Columbia. This area of study extends north to the

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Southeast Freeway along the west bank of the Anacostia River. The mandated relocation of employees to the WNY, which increases the employment population of the area, would contribute to economic growth.

***Master Plan for the Southeast Federal Center***

Adjacent to the WNY to the west, the Southeast Federal Center is planned for development into an office complex for 23,000 employees for the GSA. This institutional/government land use is compatible and complementary to the WNY. Strong relationships between the Southeast Federal Center and the WNY would contribute to the comprehensive development of the area. With the adjacency of these two areas, opportunities exist to share community/retail type functions and enhance each property's goals for development.

***Washington Navy Yard Master Plan***

Implementing the proposed action is consistent with the comprehensive plan for the WNY, which identifies it as an administrative center for naval activities. The proposed action is consistent with development goals outlined in the WNY Master Plan and projected employment levels for the WNY.

***Master Plan Update Naval Station Anacostia***

Associated with the mandated relocations, supply functions currently located within buildings proposed for renovations would be displaced. As Naval Station Anacostia is the largest Navy-owned tract of land within the District of Columbia, it provides building sites for many Navy/Department of Defense requirements that must be located near DC. This Master Plan assumes the implementation of the redevelopment plan for the WNY and the displacement of light industrial support functions from that site. Therefore, the relocation of supply functions to Naval Station Anacostia is consistent with Navy planning efforts.

The transformation of the Navy Yard into an administrative center is consistent with long-term development plans for the southeast area of the District of Columbia. The Master Plan for the Southeast Federal Center, the Buzzard Point/Near Southeast Vision 2020, the Anacostia Waterfront Master Plan, and the NCPC's *Extending the Legacy* plan for the Washington, DC monumental core, represent major visionary plans for the area, each of which proposes the redevelopment of the WNY and nearby locations into a thriving urban community of office and residential land uses. The proposed conversion of the WNY into an administrative center with increased employment levels will support the redevelopment efforts outlined in these plans.

The WNY Master Plan calls for the conversion of all remaining industrial buildings at the site to administrative use. The plan also designates the location of parking reservoirs to consolidate parking facilities and accommodate future parking demand. All proposals for the adaptive reuse of buildings in this alternative are consistent with the conversion of the WNY to an administrative center. The site for the parking structure is one of the designated parking reservoirs, also consistent with the proposed land use plan for the WNY.

The WNY hosts Naval ceremonies and summer band concerts. Many museums and historical displays are located throughout the facility and are open to the general public. Implementation of the proposed action may increase the competition for available parking at the WNY but is not expected to affect public access to the facility. Additional access to the WNY along the waterfront will be investigated in conjunction with development by the GSA along their portion of the Southeast Federal Center waterfront.



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#### 4.3.4 Environmental Justice

The WNY is located within the District of Columbia's Ward 6. As recorded in the 1990 Census Survey, a high percentage of minorities reside in Ward 6. The Census data indicates that of the 72,188 Ward 6 residents, 51,787 (71.8 percent) are Black and 19,059 (26.4 percent) are White. The 1990 Census data also indicates a large number of low income populations in Ward 6 with a poverty rate of 16.8 percent. Residential and commercial neighborhoods immediately adjacent to the WNY are limited to its northern boundary along M Street SE between 5th and 11th streets (Figure 2.2). The proposed construction/renovation would occur within the boundaries of the WNY.

On February 11 1994, President Clinton issued Executive Order (EO) 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations". This EO requires Federal agencies to identify and address disproportionately high and adverse human health and environmental effects of Federal programs, policies, and activities on minority and low income populations. The EO states that "Each Federal agency shall conduct its programs, policies and activities that substantially affect human health or the environment, in a manner that ensures such programs, policies and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) to discrimination under, such programs, policies, and activities because of their race, color or national origin."

The Department of Defense followed in March 1995 with its "Strategy on Environmental Justice". DoD's strategy focuses on implementing institutional changes, rather than one-time projects, to ensure that a healthy and safe environment exists around DoD activities that are located in or near minority and low income populations. When a new action is being proposed, one of the primary means DoD uses for addressing the potential for any disproportionately high and adverse human health and environmental effects is through the NEPA process. As appropriate during the NEPA process, the public's participation is solicited and the evaluation of the potential environmental effects (including human health, economic, and social) for each proposed action occurs.

The construction of administrative office space and a net WNY population increase of 4,100 personnel is used as the basis for assessing the potential environmental impacts for this EIS's proposed action. The potential impacts are identified throughout this Chapter. Although impacts are identified, none are considered to be substantial. To assess these impacts against the human health and environmental effects requirements of EO 12898, the findings in sections 4.1 and 4.4 along with the relevant areas of concern identified by the public, will serve as the basis for this EO evaluation.

Based on the findings in section 4.1, impacts on Topography, Geology and Soils, Floodplains, Vegetation and Wildlife, Infrastructure and Utilities are not considered to present any potential to disproportionately or adversely impact minority or low income populations. Although no substantial impacts were identified for Water Resources, Air Quality, Noise, Transportation in section 4.1, and Hazardous Substances in section 4.4, there were concerns raised by the public. A brief synopsis for each of these impact areas is provided below.



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No substantial impact from implementing the proposed action is identified for surface or subsurface water resources. Surface water quality would be protected by the requirement for both an Erosion and Sediment Control Plan and a Stormwater Management Plan. In addition, the proposed action would slightly decrease the amount of impermeable surfaces within the project area. The construction contractor will also have to comply with all environmental protection regulatory requirements during construction. This includes performing quality control inspections to ensure all requirements of the plans are met.

No substantial air quality impacts from the construction and operation of the NAVSEA facilities are identified. The small increases to traffic related emissions associated with the move from Arlington VA to the WNY would not be substantial. Potential effects to local air quality from the traffic and construction would be minimized through a limitation of parking spaces at the WNY. In addition, the potential for dust being generated during construction will be minimized by having a dust control program in place during both working and non-working periods.

A small increase in traffic related noise would occur along M Street during the peak rush hours. The number of vehicles added to the rush hour traffic would be reduced by limited development of new parking spaces at the WNY and other efforts to encourage additional ride-sharing and use of mass transit by station personnel. Typical construction related noise would result from the operation of heavy equipment during normal working hours within the Installation boundaries.

The move from Arlington VA to the WNY would not substantially effect regional transportation. A slight increase in traffic along roadways adjacent to the WNY would occur during rush hour. In conformance with NCPC guidelines, development of new parking spaces associated with the project will ultimately provide only one parking space for every three individuals working at the WNY.

The proposed action involves providing the necessary facilities and operational requirements for relocating NAVSEA personnel at the WNY. Remediation of contaminants at the WNY is administered under the Installation Restoration program. The functions of relocated NAVSEA personnel are administrative in nature and therefore do not typically use hazardous materials or generate hazardous substances. The proposed construction and renovation activities would be typical of office construction and renovation projects found around the Washington DC area. To minimize the potential for health and safety concerns during construction, the construction contractor will be required to develop and implement an Environmental Protection Plan for the project. Existing contamination associated with the project's components would be managed in accordance with applicable regulatory and procedural guidelines to provide a safe environment for WNY workers as well as the adjacent community. Any clean-up action at the WNY is expected to have a beneficial effect.

Although EO 12898 does not require a Federal Agency to address the economic impacts of a proposed action on minority and low income families, several comments on the issue of employment opportunities for the District of Columbia and local residents were received during the DEIS review period. The relocation is expected to support the President's Economic Portion of District of Columbia Plan, and a selection factor for the construction contractor will include consideration of their subcontractor management and utilization of

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local labor market. In addition, it is anticipated that the effect of the greater labor force at the WNY would provide an additional economic stimulus for additional retail, maintenance and service businesses in the local area.

Based on the analysis in this EIS and in accordance with EO 12898, the Navy finds that implementing the proposed action will have no disproportionately high and adverse human health and environmental effects on minority and low income populations within the local community.

#### **4.4 Hazardous Substances**

Base-wide assessment and cleanup of hazardous substances at the WNY is being administered under the Installation Restoration Program, which is separate from the proposed action addressed in this EIS. Appropriate remediation within the project site will be conducted in compliance with applicable regulations, as either project related activities or as part of the base-wide clean-up. The construction contractor would be required to develop and implement a worker safety plan, detailing precautions to be used during project-related activities. The following information is provided to assist the reader in understanding on-going activities at the WNY associated with the Installation Restoration Program.

The Navy has negotiated and signed a Resource Conservation and Recovery Act (RCRA) Section 7003 Consent Order with the EPA that will become effective following the completion of EPA responses to public comments. The Consent Order will regulate the Installation Restoration Program at the WNY. As part of the Installation Restoration Program, the Navy plans to conduct remedial action at the WNY beginning in 1997. As an interim measure the Navy plans to remediate specific sites of PCB and lead contaminated soils. Remediation of these sites will be conducted in accordance with applicable regulations and procedures. This will include the cleanup of PCBs that have been detected in the old coal storage area within the southern part of the project site. The Navy is in the process of finalizing plans for performing the interim measures. Work is expected to start in 1997. The Navy has committed to a number of other actions under the RCRA Corrective Action Order with the EPA. These actions include:

- Conducting a RCRA Facility Investigation (RFI) to determine groundwater movement and contaminant migration to the Anacostia River and sources of contamination which could enter the river through storm sewers;
- Conducting an investigation of storm sewers to identify condition, sample and clean lines, recommend remediations, and evaluate and repair storm sewer system as required as part of NPDES permit; and
- Conducting a secondary RFI to investigate covered soil contamination.

Site investigation (SI) activities at the WNY were completed for 13 sites and two Areas of Concern (AOC). The SI included an evaluation of groundwater quality measurements from a basewide network of groundwater monitoring wells.

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#### 4.4.1 Project Related Effects

The functions of relocated NAVSEA personnel are administrative in nature which do not typically use hazardous material or generate hazardous substances. In addition, construction and renovation activities would be typical of office construction and renovation in the Washington DC area, and would be subject to all of the regulations/permits for these types of activities.

Through existing and on-going investigations, the locations of areas at the WNY of known or suspected contamination have been identified. The proposed construction would include measures to safeguard personnel during project related activities. These would include: a safety plan to be developed and implemented by the construction contractor; an erosion and sediment control plan that includes dust suppression measures; and special treatment of water and soils associated with project related excavations. The proposed action would also include the removal and/or encapsulation of asbestos, lead, and PCBs within project buildings. Stormwater management plan development and implementation would include repair of project-related components and appropriate filter structures.

The proposed landscaping within the waterfront area of the project site will direct surface flows, from approximately one-third of the project site, through vegetated swales to inlets of the stormwater system. This configuration is expected to limit infiltration to the saturation potential of the surface soils. Most of this moisture would be used by plants and subject to evaporation. Given the small amount of anticipated infiltration of stormwater within the waterfront portion of the project site and the characteristics of the contaminants to bond to soil particles, the proposed conversion of waterfront parking to vegetation is not expected to result in migration of contaminants through groundwater to the Anacostia River. Groundwater movement below the installation will be studied as part of the Installation Restoration Program. Renovation of the old coal storage enclosure would include removal and proper disposal of suspected contaminated material, as part of the Installation Restoration Program. A portion of the storage structure would remain and used as part of the emergency containment system for the Base Heat Plant fuel storage tanks.

#### 4.4.2 Health Effects

Potential health effects on receptors of concern from demolition, renovation, construction and implementation of the NAVSEA realignment are discussed below. The majority of this information comes from the Draft NAVSEA Construction Environmental Investigation (Baker, January 1997), and Final Site Investigation (Navy, September 1996) documents.

The purpose of the evaluation of potential human health effects was to estimate potential human health risks associated with exposure to contaminated environmental media. This toxicological evaluation is a preliminary screening mechanism. This evaluation uses risk assessment methodology, but is not a baseline risk assessment. All potential exposure pathways (i.e., air soil, groundwater, surface water, sediment, and biota) and routes (i.e., ingestion, dermal contact, and inhalation) were examined in a human health risk assessment. This evaluation focused solely on the soil and groundwater exposure pathways and the ingestion route. These exposure pathways and routes were deemed to be

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representative of potential exposure scenarios. All receptors were quantitatively evaluated only for the ingestion pathway. The dermal and inhalation pathways were evaluated qualitatively to conform with EPA technical guidance (Navy, September 1996).

Examining the risks from these exposure scenarios provides a preliminary understanding of the nature of the human health risks from exposure to site groundwater and soil at the WNY (Navy, September 1996). The risks presented in this document are hypothetical risks based on standard exposure scenarios. It is extremely unlikely that these exposure scenarios would occur at the installation for the reasons outlined below.

Risks were assessed using the maximum detected concentration. Potential human health effects considered in the risk assessment include carcinogenic effects and systemic or noncarcinogenic effects. Carcinogenic effects are expressed as incremental lifetime cancer risks, while noncarcinogenic effects are expressed as hazard indices. Incremental lifetime cancer risks estimated for exposure to potential carcinogens in the toxicological evaluation were compared with EPA's acceptable target risk range of  $1 \times 10^{-6}$  to  $1 \times 10^{-4}$ . These cancer risk levels represent the probability of an individual developing cancer over his or her lifetime of exposure to the contaminant. For example, a risk level of  $1 \times 10^{-6}$  is the probability that one person in 1,000,000 exposed persons will develop a cancer in a lifetime. All hazard indices (HIs) estimated for exposures to noncarcinogens in the toxicological evaluation were compared with unity. This noncancer risk level depicts a level at or below which adverse systemic effects are not expected in the exposed population. Exceedance of these criteria indicates the presence of potentially unacceptable risks associated with the evaluated exposure scenario (Navy, September 1996).

#### *Buildings 104 and 143*

All incremental lifetime cancer risk estimates for exposure to carcinogenic contaminants in all investigated media are estimated to result in risks below the EPA acceptable target risk ranges for all receptors except for the future on-site residential adults and children (Baker, January 1997). However, residential land use is not proposed for Buildings 104 and 143, or any of the adjacent buildings at the WNY. Therefore, there would be no future on-site residential receptors at the WNY associated with the proposed action. All HIs estimated for exposure to noncarcinogenic contaminants were less than 1.0, except for those estimated for future on-site residential adult ingesting groundwater, children ingesting subsurface soil and groundwater, and for the future construction worker ingesting subsurface soil (Baker, January 1997). However, this is not a plausible situation since the District of Columbia prohibits the use of groundwater as a drinking water source (Baker, 1993). Therefore, the on-site residential scenario is not credible for the area around Buildings 104 and 143, and it is extremely unlikely that the risks of these hypothetical scenarios would be realized.

#### *Building 197*

All incremental lifetime cancer risk estimates for exposure to carcinogenic contaminants in all investigated media are estimated to result in risks below the EPA acceptable target risk ranges for all receptors (Baker, January 1997). All HIs estimated for exposure to noncarcinogenic contaminants were less than 1.0, except for those estimated for future on-site residential adult ingesting groundwater, children ingesting subsurface soil and groundwater, and for the future construction worker ingesting subsurface soil (Baker,

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January 1997). As described above, the on-site residential scenario is not credible for the area around Building 197.

New data from March 1997 shows that PAHs beneath the parking lot adjacent to Building 197 did not exceed 37 ppm for benzo (a) anthracene and only pose a threat through direct contact. Lack of exposure pathways, low level concentrations, and minimal exposure to construction workers indicate that there would be no unacceptable risk posed by the site.

#### *Buildings 142, 198, and 201*

All incremental lifetime cancer risk estimates for exposure to carcinogenic contaminants in all investigated media are estimated to result in risks below the EPA acceptable target risk ranges for all receptors except for the future on-site residential adults and children (Baker, January 1997). All HIs estimated for exposure to noncarcinogenic contaminants were less than 1.0, except for those estimated for future on-site residential adult ingesting groundwater, and children ingesting subsurface soil and groundwater (Baker, January 1997). As described above, the on-site residential scenario is not credible for the area around Buildings 142, 198, and 201. Based on the limited contamination in the soil and groundwater, and the conservative nature of the human exposure scenarios, no remedial action was recommended for the contamination near Building 201 (Navy, September 1996).

#### *Buildings 28, 73, and 176*

Of these buildings, only Building 73 was identified in the Preliminary Assessment as having a potential for environmental risk. All incremental lifetime cancer risk estimates for exposure to carcinogenic contaminants in soil media are estimated to result in risks below the EPA acceptable target risk ranges for all receptors except for on-site residential children (Baker, January 1997). The HIs estimated for exposure to noncarcinogenic soil contaminants were less than 1.0 for on-site residential adults, but were estimated to exceed 1.0 for construction workers and on-site residential children ingesting subsurface soil (Baker, January 1997). As described above, the on-site residential scenario is not credible for the area around Building 73, and the worker safety plan would include measures to prevent the ingestion of subsurface soils by construction workers. The HI estimate for groundwater carcinogenic and noncarcinogenic risk was acceptable for construction workers, but exceeded the EPA acceptable target range for on-site residential adults and children. As described above, the on-site residential scenario is not credible for the area around Building 73, the lack of exposure pathways, and minimal exposure to construction workers indicate that there would be no unacceptable risk posed by the site.

In addition to the aforementioned studies, the Navy conducted a specific risk assessment for future occupancy of the proposed buildings and office workers during construction. The conclusion of the draft study is that risks are within acceptable levels (Baker, August 1997).

#### **4.4.3 Brief Description of Potential Exposure Scenarios and Receptors**

The following briefly describes the potential exposure scenarios for contaminants and the potential receptors that could be affected by releases of contaminants from the WNY during construction of the proposed action. The primary receptors of concern are the on-

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site construction worker during construction/renovation and on-site NAVSEA worker after the relocation. The primary exposure scenarios of concern are skin contact, ingestion and inhalation. See the Final Site Investigation for the WNY (Navy, September 1996) for more detailed information.

#### *Exposure Scenarios*

The exposure assessment identifies pathways and routes by which site related contaminants may reach potential human receptors. An exposure pathway consists of four essential elements: a source; a transport mechanism; an exposure route; and an exposure point. When all four of these components are present, the exposure pathway is considered complete (Navy, September 1996).

Soil contaminants may reach human receptors via direct contact with the skin (dermal contact), ingestion of contaminated soil particles, and inhalation of contaminated dust. Contaminants in surface and groundwater may adversely affect human receptors through dermal contact or by ingestion. Contaminants in air are primarily an inhalation hazard that would be controlled through dust suppression measures implemented as part of the proposed action. Inhalation of volatile groundwater constituents was not considered to be a likely exposure scenario because the primary contaminants detected in groundwater were metals, which are not volatile (Navy, September 1996). Fugitive dust would be controlled as part of an erosion and sediment control plan developed for the proposed action.

#### *Receptors*

Based on the current uses of the area proposed for NAVSEA realignment, the primary receptors of concern evaluated under the current scenario were on-site construction workers and relocated NAVSEA personnel. These receptors are briefly described below.

Construction workers could be exposed during construction or renovation of buildings at the WNY. This exposure could occur through dermal contact with contaminated media, and inhalation of contaminated dust. Exposure via ingestion is unlikely and would only occur if employees fail to wash their hands before eating. If the employees fail to wash, small quantities of contaminants could be ingested. Although these types of exposure are possible for the construction worker, it is unlikely that an individual would be exposed for a significant period of time, work on any single type or area of construction is likely to last more than a year, and construction and renovation activities are likely to occur in predominantly uncontaminated areas.

Exposure of the relocated NAVSEA personnel to significant levels of contamination at the WNY is unlikely. Exposure through dermal contact and ingestion is unlikely since any remaining contaminants will be covered by clean soil, asphalt, concrete, or sealants. Exposure through inhalation is unlikely for the reasons just stated, and also because most of the contaminants that occur at the WNY (e.g. metals) are not volatile.

## **4.5 Cumulative Impacts**

Cumulative effects are those environmental impacts resulting from the incremental effect of the proposed action or alternatives when added to other past, present, and reasonably foreseeable future actions.



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The increase in personnel levels required by BRAC 93 and 95 will result in the increase of the WNY's current population of 5,400 employees to 10,800 by 2001. An increase in workforce is also anticipated to occur at the SEFC in the future (although it is unclear if it would occur before 2001). The combined increase in Federal personnel from both BRAC relocations to the WNY and future development of the Southeast Federal Center is expected to further increase traffic and air related impacts, as well as demand for retail services within the area. **In addition, NAVSEA defense contractors and technology firms currently located in the Crystal City area may choose to relocate to property near the WNY. The resulting demand for office space would increase development pressure for the construction of new office space in the commercially zoned areas near the WNY to accommodate private sector contractor employees.**

The Anacostia Waterfront Master Plan and the Buzzard Point/Near Southeast Vision 2020 propose long-term development of office and residential uses for the west bank of the Anacostia River in the District of Columbia from Buzzard Point to the 11th Street Bridge and north to the Southeast Freeway. This additional development is projected to provide employment opportunities and increase economic activity within the District of Columbia. Although most jobs would probably be filled by suburban residents, these efforts would also provide employment opportunities for local residents and stimulate local retail business. An expanded employee base in the District provides greater economic activity and revenue for the city. Expansion of the WNY contributes to this growth in population with its efforts to become a fully occupied administrative center. Comprehensive development within Washington, DC is controlled and coordinated by various planning and regulatory agencies of the District government. This planning and regulatory process is designed to identify and address foreseeable problem and potential adverse effects of proposed action within the District.

Community retail services both inside and immediately outside the WNY are very limited. Although not part of this proposed action, the Navy expects to increase retail services on-base, such as restaurants, dry cleaners, and convenience stores. The demand generated by the influx of NAVSEA personnel into this area is expected to create new opportunities for local businesses both in and outside of the WNY.

Should additional construction within the vicinity occur at the same time as the proposed action, an increase in localized impacts would be expected.

#### **4.6 Relationship Between Local Short-Term Uses of the Environment and Enhancement of Long-Term Productivity**

Regulations for the preparation of an EIS require that the relationship between the short-term use of the environment and the maintenance of long-term productivity of that environment be addressed. The current value of the WNY as an historic property will continue to be maintained throughout the implementation of the proposed action. The site of the proposed action is a developed urban environment possessing little value as a natural resource area. Therefore, adverse impacts to natural resource or environmental productivity at this site are not anticipated from the proposed action. The Anacostia River, which is adjacent to the site of the proposed action, is an important natural resource. The planned conversion of existing vehicle parking areas along the Anacostia waterfront to urban parkland/greenspace will coincide with the NCPC plans to improve riverfront aesthetics and increase the amount of vegetation near the riverfront.



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The planned improvements to the existing stormwater management system will contribute to the improvement of effluent from the WNY into the Anacostia River. The anticipated contamination remediation measures associated with the proposed action will also contribute to water quality improvements in the Anacostia River.

Construction activities and the initial influx of personnel would temporarily disrupt traffic and parking patterns within the area. These disruptions are expected to be short-term, with a new routine quickly becoming the established pattern of use.

Long-term productivity of the environment as a result of the proposed action includes the increased efficiency of the work environment for Navy employees and the establishment of new community services at the WNY. Greater economic activity in the area may result because of employment opportunities at the WNY.

#### **4.7 Irreversible and Irretrievable Commitment of Resources**

Regulations for the preparation of an EIS require that irreversible and irretrievable commitment of resources associated with the proposed action be addressed. The term "irreversible commitment of resources" refers to the use of nonrenewable resources, commodities, or properties that are only renewable over long periods of time, or to the loss of future options. "Irretrievable" applies to production losses, harvest, or use of renewable natural resources. Resources or resource uses may be lost but the conditions supplying the resource can be restored.

Construction and renovation activities will result in direct and indirect commitments of material and financial resources. Construction and renovation activities would result in the irreversible commitment of millions of dollars to support construction and operation at the WNY.

The proposed action will require the use of fossil fuels, and other finite resources during the design, construction and operation which cannot be estimated precisely at this time. These resources will be irretrievably committed to the project. The proposed project will require the commitment of various construction materials, including cement, aggregate, steel, glass and asphalt. Much of the material accumulated for construction may at some time be recycled or reused. However, these materials should also be considered as irretrievably committed.

If the final design and implementation of the proposed action requires the demolition of eligible National Register structures, these historic structures would be irretrievably lost, although they would be documented in accordance with established Advisory Council for Historic Preservation requirements.

#### **4.8 Summary of Mitigation Actions**

Planned mitigation measures are imposed to reduce or eliminate adverse impacts. The term "mitigation" includes the following: Avoiding an impact by not taking an action; Minimizing impacts by limiting the degree or magnitude of an action; Rectifying an impact by repairing, rehabilitating, or restoring the affected environment; Reducing or eliminating the impact over time; and Compensating for the impact by replacing or providing substitute resources or environments.

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### **Water Resources**

Project related activities would include implementation of an Erosion and Sediment Control Plan and Stormwater Management Plan developed and approved in coordination with the District of Columbia Department of Consumer and Regulatory Affairs. Water from excavation sites would be treated prior to discharge into the sanitary sewer system, in coordination with the District Water and Sewer Authority Pretreatment Office.

Through coordination with the EPA the WNY was issued a draft permit in early 1997 which covers all stormwater outfalls. The temporary NPDES permit requires a rehabilitation of the WNY's storm drainage system by June 1999, following completion of a system cleaning and evaluation. To support the Stormwater Pollution Prevention Plan for the WNY and the requirements for obtaining a NPDES permit for the outfalls, the Navy has conducted an illicit discharge study of the WNY and is implementing corrective actions.

The purpose of the Stormwater Pollution Prevention Plan is to meet the requirements of the EPA's NPDES General Permit for Stormwater Discharges Associated with Industrial Activity. The Stormwater Pollution Prevention Plan includes BMPs which are practices and controls designed to minimize surface water pollution at its source (RUST, 1995 and 1996).

The Navy has also made substantial progress in removing illicit connections to the storm drainage system at the WNY. Some of these actions involve buildings associated with the NAVSEA realignment. These included the removal of the "paint room slop sink" in Building 201 so that paint wastes would no longer be discharged to the storm drainage system.

### **Floodplains**

The majority of the project site is within the 100-year floodplain, and design of the structural modifications and new construction will meet the criteria of the National Flood Insurance Program (44 CFR 59 et seq.) to offset the effects of minor flooding. New construction would be constructed with masonry and/or concrete or similar floodproof materials to reduce the effects of flooding. Sensitive/mission-critical equipment would be located above the anticipated 100-year flood level and additional measures, such as elevated floor levels and raised doorways, would be employed as needed to protect the structures and provide for the health and welfare of workers.

### **Air Quality**

The project includes limited development of new parking at the WNY, which will result in a parking ratio of one space for every three employees at the Installation following completion of the BRAC projects. The current practice of ride-sharing and use of mass transit by both existing and future employees of the WNY are expected to continue, and additional participation will be encouraged at the Installation. Construction contractors will be required to keep dust down at all times, including nonworking periods. Contractors will be required to sprinkle or treat with dust suppressants, the soil at the site, haul roads and other areas disturbed by construction. Dry power brooming will not be permitted. Instead vacuuming, wet moping, wet sweeping or wet power brooming are recommended. Only wet cutting will be permitted for cutting concrete blocks, concrete and bituminous

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concrete. Construction vehicles will be properly equipped, maintained, and operated, and open bed trucks will be covered.

#### **Traffic**

The project includes limited development of new parking at the WNY, which will result in a parking ratio of one space for every three employees at the Installation following completion of the BRAC projects. The current practice of ride-sharing and use of mass transit by both existing and future employees of the WNY are expected to continue, and additional participation will be encouraged at the Installation.

#### **Cultural Resources**

Each of the four alternatives would have an adverse effect on historic structures and a possible effect on archaeological resources. In compliance with Section 106 of the National Historic Preservation Act, the Navy has consulted with the District of Columbia Historic Preservation Officer and the Advisory Council on Historic Preservation regarding the implementation of appropriate actions to mitigate any adverse effects of the NAVSEA project on cultural resources. In accordance with Section 106, as implemented in the *Procedures for Protection of Historic Properties* (36 CFR 800), the Navy, the District of Columbia HPO, and the ACHP have entered into a Memorandum of Agreement which stipulates actions which the Navy will implement to ensure mitigation of adverse effects. A summary of the mitigation actions is provided above in Section 4.2, and the full text of the MOA is included with this EIS as Appendix D

#### **Safety**

The construction contractor will be required to prepare a safety plan for the project and conform to the requirements of Federal, State, and local safety and health laws and regulations. All phases of construction will follow appropriate safety procedures and practices. The contractor will use appropriate worker protection and safety equipment as required. Qualified personnel will be assigned to oversee worker safety at the construction site.

#### **Contamination**

##### ***Ongoing Base-wide Mitigation***

Many plans and procedures are in place at the WNY that serve to reduce the impacts of installation activities on the environment. This includes a Spill Prevention, Control, and Countermeasures Plan, a Hazardous Waste Management Plan, a Pollution Prevention Plan, and a Stormwater Pollution Prevention Plan (including the completion of the Navy's scheduled redirection of steam condensate discharges at Buildings 28, 104, 143, and 201 from storm drains to the sanitary sewer system [SWPPP Update, 10/96]). In addition, the Navy is in the process of entering into a RCRA Consent Order with the EPA that would lead to environmental assessments and cleanup actions at the WNY. In addition, cleanup of PCBs detected in the old coal storage are will be completed under the Installation Restoration Program.

##### ***Project Related Mitigation***

The contractor will be advised of the contamination within the project site and required to comply with all applicable laws and regulations and obtain the appropriate permits and authorizations. The Navy will require construction contractors to adhere to strict environment, health and safety requirements and will oversee all phases of construction.

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To help implement these requirements the Navy will require the construction contractor to prepare individual plans for dealing with contaminated material at the work site. These include: Environmental Protection Plan; Asbestos Plan; Soil Containing Petroleum Removal Plan; Plan of Operations for removal of lead contaminated soil; PCB removal work plan and disposal plan; Pollution Prevention Plan; and Lead (paint) Removal and Disposal Plan. In addition, the contractor will be required to remove and properly dispose of: bird and bat droppings; mercury containing thermostats, switches, light fixtures and bulbs; chlorofluorcarbon refrigerants; and PCB containing light ballasts. Soils to be removed from the project site as a result of construction will be tested for site related contaminants and disposed of in accordance with applicable regulations.

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## 9.0 ACRONYMS/ABBREVIATIONS

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## 9.0 Acronyms/Abbreviations

AAQS	Ambient Air Quality Standards
ACHP	Advisory Council on Historic Preservation
AOC	Area of Concern
APA	Area of Potential Effects
AT&T	American Telephone and Telegraph Company
BMP	Best Management Practices
BRAC	Base Realignment and Closure
CAA	Clean Air Act of 1977
CAAA	Clean Air Act Amendments of 1990
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMS	Corrective Measures Study
CO	Carbon Monoxide
CRAE	Cultural Resources Assessment of Effects
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted Decibel
DBCRA	Defense Base Closure and Realignment Act
DCRA	District of Columbia Department of Consumer and Regulatory Affairs
DDT	Dichlorodiphenyl Trichloroethane
DEIS	Draft Environmental Impact Statement
DoD	U.S. Department of Defense
DOT	Department of Transportation
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
GSA	U.S. General Services Administration
HABS/HAER	Historic American Buildings Survey / Historic American Engineering Record
HI	Hazard Index
HPO	Historic Preservation Officer
ICPRB	Interstate Commission on the Potomac River Basin
IR	Installation Restoration
ITE	Institute of Transportation Engineers
IWL	Industrial Waste Line
KWH	Kilowatt-Hours
KYPIPE	Kentucky Pipe Model
LOS	Level of Service
MOA	Memorandum of Agreement
MCL	Maximum Contaminant Level
MWCOG	Metropolitan Washington Council of Governments
NAAQS	National Ambient Air Quality Standards

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NAMS	National Air Monitoring Stations
NAVSEA	Naval Sea Systems Command
NCPC	National Capital Planning Commission
NCTS	Naval Computer and Telecommunications Station
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NNMC	National Naval Medical Center
NO <sub>3</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
NOA	Notice of Availability
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NSWC	Naval Surface Warfare Center
O <sub>3</sub>	Ozone
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
Pb	Lead
PCB	Polychlorinated Biphenyls
PEPCO	Potomac Electric Power Company
PM <sub>10</sub>	Particulate Matter
PPE	Personal Protective Equipment
ppm	parts per million
PWC	U.S. Department of Navy, Public Works Center
RCRA	Resource Conservation and Recovery Act
SBA	U.S Small Business Administration
SEFC	Southeast Federal Center
SI	Site Investigation
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Stations
SO <sub>2</sub>	Sulfur Dioxide
SOV	Single-Occupancy Vehicles
SVOC	Semivolatile Organic Compound
TMP	Traffic Management Plan
TPH	Total Petroleum Hydrocarbon
TSS	Total Suspended Solids
VTM	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WNY	Washington Navy Yard
WRPD	Wrapped Steel

## APPENDIX A

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## RECORD OF NON-APPLICABILITY

### BRAC RELOCATION OF NAVAL SEA SYSTEM COMMAND TO THE WASHINGTON NAVY YARD WASHINGTON, DC

This Record of Non-Applicability (RONA) is prepared in accordance with Navy policy, to demonstrate compliance with the Conformity provisions of the Clean Air Act. The RONA is based on the findings of the attached Applicability Analysis, which provides detailed information on project related air emissions.

The Conformity Regulations were formulated as a process to insure that emissions from proposed Federal actions do not interfere with a states's mandated achievement of National Ambient Air Quality Standards. The Environmental Protection Agency has established threshold levels of specific pollutants within the Conformity regulations as a guide for triggering the initiation of a formal coordination process with the affected state. Federal actions with projected emissions below this level would be considered "Nonapplicable" to the Conformity regulations.

The results of the Applicability Analysis show that annual emissions from construction or operation of the project components associated with the mandated relocation of NAVSEA personnel are below the established threshold levels making this action "Nonapplicable" to the Conformity requirements.

Elizabeth Morgan Floore  
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## **Air Quality / Applicability Analysis**

The Environmental Protection Agency (EPA) has promulgated numerous regulations designed to implement the provisions of the Clean Air Act (CAA). A key initiative of the implementation program is the requirement for State Implementation Plans (SIP), which each state explains how it intends to achieve clean air standards within prescribed time frame. The SIP approach more effectively recognizes localized conditions and integrates community development plans with local regulations to achieve CAA goals. To insure that Federal projects do not interfere with attainment of SIP objectives, the EPA established special General Conformity Regulations (40 CFR, Part 93). The General Conformity Regulations establish guidelines for estimating potential emissions from proposed Federal projects, specify threshold emission levels to determine the applicability of the regulation to Federal projects and to require emission reductions for projects that exceed threshold levels or are not accounted for in applicable SIPs.

This report or Applicability Analysis has been prepared to identify project related emissions and determine whether the Conformity regulations are applicable to the project.

### **1.0 Project Description**

As a result of the 1995 Defense Base Closure and Realignment Commission (BRAC) process, the Naval Sea System Command (NAVSEA) was redirected from the 1993 BRAC receiver site in White Oak, Maryland to the Washington Navy Yard (WNY). The 4,100 NAVSEA personnel relocating to the WNY function in an administrative capacity. Due to the lack of existing office space at the WNY, approximately 1,000,000 square feet of additional administrative space would be needed to accommodate relocating personnel. Other project components include parking facilities, associated infrastructure, services and support to facilities operations. Several alternatives for providing additional office space at the WNY have been identified, all include some degree of demolition, new construction and/or renovation of existing facilities.

### **2.0 Air Quality Regulations**

The EPA defines ambient air in 40 CFR 50, as "that portion of the atmosphere, external to buildings, to which the general public has access." In compliance with the 1970 Clean Air Act and the 1977 and 1990 Amendments (CAAA), EPA has promulgated ambient air quality standards and regulations. The National Ambient Air Quality Standards (NAAQS) were enacted for the protection of the public health and welfare, allowing for an adequate margin of safety. To date, EPA has issued NAAQS for six criteria pollutants; carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particles with a diameter less than or equal to a nominal 10 micrometers (PM<sub>10</sub>), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), and lead (Pb). Health and welfare effects of applicable criteria pollutants are described below:

There are two types of standards: Primary and Secondary. Primary standards are designed to protect sensitive segments of the population from adverse health effects which may result from exposure to criteria pollutants. Secondary standards are designed to protect human health and welfare, and in some cases, are more stringent than the primary standards. Human welfare is considered to include the natural environment (vegetation) and the man made environment (physical structures). Areas which are below the standards are in "attainment" while those that equal or exceed the standards are in "nonattainment".

Under the CAA and CAAA, state and local air pollution control agencies have the authority to adopt and enforce ambient air quality standards (AAQS) more stringent than the NAAQS. The District of Columbia has adopted all of the NAAQS.

Although EPA has the ultimate responsibility for protecting ambient air quality, each state and local government has the primary responsibility for air pollution prevention and control. The CAA requires that each state submit a State Implementation Plan which describes how the state will attain and maintain air quality standards in nonattainment areas. The SIP must be approved by EPA for each nonattainment criteria pollutant. The District developed a SIP and in order for projects to comply with the CAA and CAAA they must conform with attainment plans documented in this SIP.

On July 18, 1997 the EPA promulgated new NAAQS for ozone and particulate matter. These new standards are effective September 16, 1997. A new eight-hour ozone standard of 0.08 parts per million (ppm) replaces the previous one-hour standard of 0.12 ppm. The new PM<sub>2.5</sub> standards, 15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) annual and 65  $\mu\text{g}/\text{m}^3$  24-hour, supplement the existing PM<sub>10</sub> standards of 50  $\mu\text{g}/\text{m}^3$  and 150  $\mu\text{g}/\text{m}^3$  respectively. States are to submit, for EPA approval, revisions to the SIPs that provide for attainment and maintenance of the new standards through control programs directed to sources of the pollutants involved. This federal action will adhere to all new revisions of the SIPs as they pertain to its implementation and operation.

## **2.1 Existing Conditions**

### **2.1.1 Meteorology / Climate**

The following meteorological data was collected at the National Airport immediately south of Washington, DC. The airport is located on the Potomac River south of the WNY. Data collected at the airport is considered to represent conditions at the WNY.

**Winds.** Data collected at the airport indicate that the prevailing winds are predominantly from the south with wind speeds averaging between 2 to 5 meters per second ([mps]; 4 to 12 miles per hour [mph]). Calm winds, those less than 1 mps (2.6 mph) occur at a frequency of approximately two percent.

**Temperatures.** National Airport is located at the center of an urban heat island. As a result, low temperatures recorded at the airport are the highest for the Washington, DC area. Summers are warm and humid and winters are cold, but not severe. Summertime temperatures are usually in the upper 20's Celsius (80's Fahrenheit) and the winter dips to just below 0° Celsius (upper 20's Fahrenheit). The average date for the last freezing temperature in the spring is April 1 and the average date for the first freezing temperature in the fall is November 10.

**Precipitation.** Precipitation is rather uniformly distributed throughout the year. Thunderstorms are not usually severe. Severe hailstorms can occur in the spring. Tropical storms can bring heavy rain, high winds and flooding, but extensive damage from wind and tidal flooding is rare. Wind Gusts of nearly 45 mps (100 mph) and rainfall over 18 centimeters (7 inches) have occurred during passage of tropical storms and hurricanes. Normal snowfall during the winter season is 46 centimeters (18 inches).

### **2.1.2 Air Quality**

The Washington Navy Yard is located in the District of Columbia, which itself is within an area that includes parts of Virginia and Maryland and is designated by the EPA as nonattainment for the criteria pollutant ozone with a designation of serious and an attainment date of November 15, 1999. The Washington Metropolitan area, which had been designated nonattainment for CO,

was reclassified on March 15, 1996 by the EPA as in attainment of the NAAQS for CO (Federal Register, January 1996, Vol. 61, No. 20, pg. 2931).

Since ozone is a "regional" pollutant which is formed over time, and often at a great distance from the area where its precursor emissions originated, its analysis is conducted on a regional level and not on a project or action level. Federal actions that are located in CO nonattainment or maintenance areas are required to conduct a CO "hot spot" analysis if it is reasonably anticipated that the action could adversely affect local levels of CO.

The basic requirements of the State and Federal Clean Air Acts are that "Federal actions" shall not: cause or contribute to any new violation of the NAAQS; increase the frequency or severity of any existing violation of the NAAQS; or delay the timely attainment of the NAAQS.

Ambient air quality is monitored in the District by a network of stations meeting EPA's design criteria for State and Local Air Monitoring Stations (SLAMS) and National Air Monitoring Stations (NAMS). There were three CO and four O<sub>3</sub> monitoring stations in operation during the period 1993 through 1995 in the District. The highest eight-hour and one-hour values recorded at these stations for each of these pollutants respectively during the five year period of 1991 and 1995 are contained in Table 1 for CO and Table 2 for O<sub>3</sub>. A review of the data indicate that CO concentrations have been declining while O<sub>3</sub> concentrations continue to remain at elevated levels.

**Table 1**  
**Second Highest Eight-hour CO Monitoring Data Washington DC; 1990-1995 <sup>a</sup>**

Station	Year				
	1991	1992	1993	1994	1995
West End Library: 24th & L Street NW	9.0	5.7	7.3	5.6	5.8
C&P Phone Co. L Street Between 20th & 21 Street.	8.8	5.6	8.3	5.4	6.6
34th & Dix Street NE	ND	ND	7.1	6.5	5.0

<sup>a</sup> Values are in parts per million (ppm)

ND No Data

NAAQS: eight hour = 9.0 ppm [one-hour (values not shown) = 35.0 ppm]

Source: EPA, AIRS Executive Version 3.0: Airs Data Summary for December 1995

**Table 2**  
**Highest One-hour Ozone Monitoring Data Washington DC; 1990-1995 <sup>a</sup>**

Station	Year				
	1991	1992	1993	1994	1995
Takoma SC. Piney Branch Road & Dahlia	0.148	0.109	0.112	0.122	0.127
West End Library: 24th & L Street NW	0.147	0.091	0.102	0.112	0.115
SE End McMillian Reservoir	ND	ND	ND	0.135	0.155
34th & Dix Street NE	ND	ND	0.137	0.137	0.132

<sup>a</sup> Values are in parts per million (ppm)

ND No Data

NAAQS: One-hour average = 0.12 ppm

Source: EPA, AIRS Executive Version 3.0: Airs Data Summary for December 1995

- **Carbon Monoxide (CO)** — a colorless, odorless, tasteless and toxic gas which is formed through incomplete combustion of crude oil, fuel oil, natural gas, wood waste, gasoline and diesel fuel. Most combustion processes produce at least a small quantity of this gas, while motor vehicles constitute the largest single source. Human exposure to carbon monoxide



can result in serious health effects before exposure is ever detected by the human senses. The most serious health effect of CO results when inhaled CO enters the blood stream and prevents oxygen from combining with hemoglobin, impeding the distribution of oxygen throughout the blood stream. This process significantly reduces the ability for people to do manual tasks, such as walking.

- **Ozone (O<sub>3</sub>)** — an oxidant which is a major component of urban smog. Ozone is a gas which is formed naturally at higher altitudes and protects the earth from harmful ultraviolet rays. At ground level, ozone is a pollutant created by a combination of hydrocarbons, nitrogen oxides and sunlight, through photochemistry. Ground level ozone is odorless, colorless, and is the predominant constituent of photochemical smog. Human exposure to O<sub>3</sub> can cause eye irritation at low concentration and respiratory irritation and inflammation at higher concentrations. Respiratory effects are most pronounced during strenuous activities. Ozone exposure will deteriorate man-made materials and reduce plant growth and yield.

### 3.0 Conformity Applicability Analyses

This applicability analysis was conducted in order to identify potential increases in criteria air pollutant emissions associated with the project and to determine if the proposed action is subject to the General Conformity Rule established in 40 CFR, part 93 entitled: "*Determining Conformity of Federal Actions to State or Federal Implementation Plans*" (the rule). The rule applies to those federal actions which are located in areas of nonattainment of the NAAQS.

Since this federal action is located within an area designated by EPA as a maintenance area for CO and a nonattainment area for O<sub>3</sub> a General Conformity rule applicability analysis is warranted. The analysis estimated potential increases in emissions of CO and the O<sub>3</sub> precursor pollutants; volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) associated with the action. The estimated emissions were compared to the *de minimis* levels for each of these pollutants: 100 tons per year (tpy) for CO, 50 tpy for VOC, and 50 tpy for NO<sub>x</sub>. If the estimated emissions for the action are below *de minimis* thresholds, the action is assumed to conform with the SIP and would not be applicable to the Conformity regulations. If the action exceeded the *de minimis* threshold, however, the Navy would be required to prepare and coordinate a formal Conformity Determination with state regulators, ultimately resulting in a total offset of project generated emissions or incorporation of the project by the state into its SIP.

As a Federal action the planned relocation must adhere to the requirements of the general conformity rule. The rule does not require analysis of short-term impacts (i.e. less than annual) since actions below the annual thresholds are presumed to comply with the SIP's plans to achieve the NAAQS through annual emissions reductions. It is also noted that the action is not anticipated to generate emissions, either hourly or daily, at levels significant enough to have any measurable effects on ambient air quality.

### 3.1 Construction Emissions

Construction emissions for this action will be from renovation/demolition of existing buildings and construction of new buildings. Emissions from construction activities are from the use of heavy equipment and delivery vehicles during site preparation and structure erection. For this analysis three different building use alternatives were investigated. Alternative 1 involves the renovation of Buildings 197, 176, and 104 and construction of three new buildings to replace Buildings 197E, 143/28, and 201/198. Alternative 2 involves the renovation of Buildings

197/104/143/176/201 and construction of a new Building 197E. Alternative 3 involves the renovation of Buildings 197, 73, and 104 and construction of one new building to replace Buildings 143/28/176/201/198/142. Alternative 4 involves the partial renovation of Building 197 and construction of a new eastern addition (197E) as well as a new building to replace demolished Buildings 143/28/176/201/198/142.

Heavy equipment emissions were estimated using emission rates from the EPA document *Compilation of Air Pollutant Emission Factors Volume II: Mobile Sources (AP-42)*. Emissions in pounds per hour of equipment use were averaged for nine classes of construction diesel equipment, multiplied by an assumed amount of equipment in use at the site and subsequently by an assumed number of operating hours per year. For calculation purposes the following assumptions were used; 20 pieces of equipment would be in use daily, equipment would be in operation for eight hours a day, and the work year consisted of 240 days. It was also assumed that 20 delivery trips would be made daily. The methods used to estimate delivery vehicle emissions is described below in the operation emissions section. It was also assumed that construction equipment emissions would be the same for all four alternatives.

VOC emissions from construction paint use were estimated for both office space and garage space. The amount of VOC emissions was calculated based on the estimated amount of paint necessary to cover available wall and ceiling space, and to paint vehicle parking space lines. Project Plans call for an open air office concept with individual spaces partitioned rather than individual offices with paintable walls. Only a small portion of the personnel (about 12 percent) will have individual offices. Additional wall space will be needed for closets, rest rooms, conference rooms and the like. Based on these assumptions it is estimated that the total paintable wall space will be approximately 1,007,000 square feet ( $\text{ft}^2$ ). This is assumed to be the same for all the alternatives.

The total paintable wall space was divided by a paint coverage in gallons per square feet ( $\text{gal}/\text{ft}^2$ ) to get gallons of paint. The assumed VOC content per gallon of paint was then multiplied by the number of gallons used to produce the estimated amount of VOC emissions from painting. For calculation purposes it was assumed that three coats of paint would be used (one primer and two finish), that water-based latex paint with a VOC content of 3 lbs per gallon would be used, and that one gallon of paint would cover  $400 \text{ ft}^2$ .

Paint use for parking garage space was calculated based on the amount of paint required to paint parking space lines. Since every two parking spaces usually share a common line the amount of paint needed to paint two spaces was determined. A average parking space was assumed to be 9 ft wide by 19 ft long with 4 inch wide lines. This produced a total painted line area of approximately  $25 \text{ ft}^2$  per every two parking spaces. The total number of parking spaces was divided by two then multiplied by  $25 \text{ ft}^2$  to obtain the total area of lines to be painted. The VOC emissions were calculated the same as described above for office space.

### 3.2 Operation Emissions

Operation emission sources can be broadly defined to fall within two categories; direct emissions (such as boilers, generators and heaters) and indirect emissions (such as employee, delivery, and visitor vehicles). Direct emissions from facility operation are considered to be those emitted by the facility as part of it's normal daily functions, primarily from the operation of facility boilers. Indirect emissions are considered to be those emissions generated by employee vehicle trips, and facility delivery vehicles traveling on the site. Since this is a

mandated BRAC action, the relocation of the 4,100 NAVSEA personnel and associated operating emissions are common to all alternatives.

Heat for the affected buildings is already supplied by the WNY heat plant. The power source for the chillers, to cool the buildings, will be electrical and no emissions are assumed for this source. The actions identified in the alternatives are not expected to exceed the permitted operating capacity of the heat plant. Therefore emissions generated by the heat plant boilers are not expected to exceed those allowed by state operating permit. For these reasons no direct emissions are identified for these sources as part of this action.

### **3.3 Vehicle Emissions**

Daily vehicle emissions during operation were estimated for employee vehicles trips, on-site delivery vehicle travel, and on-site visitor vehicle travel. The vehicle emission rates used were based on rates calculated by the EPA approved MOBILE5a vehicle emissions model. MOBILE5a calculates an average fleet emission rate in grams of pollutant per vehicle mile traveled (g/VMT). The estimated VMT for the action was calculated by multiplying the estimated number of new trips for each type of vehicle trip by an estimated vehicle trip length.

The development of new parking spaces will be limited to 1,687 spaces. This coincides with the National Capital Planning Commission (NCPC) requirement of a 3:1 employee to parking ratio. Employee vehicles can be approximated at 1,367 ( $4,100/3=1,367$ ). Discussions with NCPC has resulted in the exclusion of vans from the 3:1 ratio. Since 9% of NAVSEA personnel expect to van pool, an additional 62 vehicles ( $4,100/9\%=369/6$  per van=62) would bring the total to 1,429 NAVSEA employee vehicles. This number would also be increased by 41 vehicles ( $4,100*1\%=41$ ) to account for through traffic that drop off employees and then continue their commute to another destination. This would bring the total daily employee vehicles to 1,470.

Since all the employees are to be relocating from Crystal City to WNY, and the two sites are in close proximity to one another, only the net change in distance traveled by the relocating employees was considered. This net change was measured as the road distance between the two sites and for calculation purposes was considered an increase in distance traveled. A review of roadway mapping for the area indicates there are approximately 8 road kilometers (km; 5 miles) between the two sites or a round trip distance of 16 km (10 miles). The total number of daily delivery trips for the relocated facilities is estimated to be 20, while visitor trips are estimated to be 638. On-site travel for these trips was assumed to be one mile.

The total number of vehicle trips were multiplied by the trip distance in miles to obtain the daily VMT. The daily VMT was then multiplied by the vehicle pollutant emission rate in g/VMT and subsequently multiplied by 240 working days per year to obtain an annual amount of emissions per year. These annual emissions were converted to tons per year (tpy), summed, and compared to the de minimis.

### **3.4 CO Hot Spots Analysis**

The most significant source of CO emissions attributable to the action is the exhaust from motor vehicles traveling to and from the WNY. In urbanized areas ambient concentrations of CO tend to be highest near locations where vehicles accumulate, slow down, and idle for a period of time (e.g. intersections and parking lots). For this reason an intersection approach to analyzing potential CO impacts was chosen.

### 3.4.1 Intersection Selection

To determine the potential impact to local levels of CO due to WNY traffic, the signalized intersections impacted by WNY traffic were reviewed. Signalized intersections are reviewed over unsignalized intersections, since current modeling tools cannot accurately predict traffic flow at unsignalized intersections. As a result the level of CO impacts near unsignalized intersections cannot be accurately predicted. Signalized intersections however, can be easily modeled with the tools currently available and the level of CO impacts more accurately predicted.

Intersections chosen for analysis were determined using a qualitative screening technique to determine if traffic congestion at the intersection could adversely affect air quality. Each of the signalized intersections were rated by overall Level of Service (LOS) and percentage of total WNY traffic that travels through them. LOS is defined here in the context of the Highway Capacity Manual definition, which relates a letter code (*A*, the highest through *F*, the lowest) to the amount of traffic delay on the roadway, *A* representing the best flow conditions and *F*, the worst. The LOS rating is a measurement of the operating conditions in the intersection and how these conditions effect traffic flow and delay. It is related both to the physical characteristics of the intersection and to the various operating conditions that occur when the intersection is carrying variable traffic volumes. The intersection(s) with the lowest LOS rating and highest level of WNY traffic were chosen for modeling analysis

Immediate and principle access to the WNY is available from signalized intersections at M and 9th Street/Parsons Ave. (main entrance gate) and 11th Street and N Street access gates. Other signalized intersections in the immediate vicinity of the WNY through which WNY traffic travels are M St. at 8th St., M St. at 11th St., and N St. at 11th Street. The LOS rating and percent of total WNY traffic handled by these intersections, is contained in Table 3.

**Table 3**  
**Signalized Intersections Impacted by WNY Traffic**

Intersection	Percent of Total WNY Traffic		Existing Conditions Level of Service		Future Conditions Level of Service	
	Entering or leaving by this Route		Rating		Rating	
	In	Out	AM	PM	AM	PM
M Street at Isaac Hull Avenue	0%	17%	N/A	B	A	B
M Street at 8th Street	ND	ND	B	B	B	B
M Street at 9th Street	38%	41%	B	B	B	B
M Street at 11th Street	ND	ND	C	C	D	D
N Street at 11th Street	55%	35%	B	C	B	C

Notes: ND = No Data

N/A = Not applicable

\* = Traffic volumes exceed capacity of the intersection

Source: Gorove/Slade, 12/03/96.

Based on a review of the LOS data and traffic percentages, the intersections of M St. at 11th (which will operate at a LOS of D), and N Street and 11th Street (which will handle more than 50% of the WNY traffic) were chosen for the CO "hot-spot" analysis.

### **3.4.2 Project Analysis Years**

In order to accurately compare the potential impact from the proposed action to a "no-action" a baseline was established for data comparison. To accomplish this a base year, or "existing" year was chosen to represent traffic at the time this analysis was conducted. It was also necessary to establish a baseline for the year in which the project is anticipated to be completed. To meet these criteria, traffic generation and distribution were used for a base year of 1996 and a action year of 2001. The action year of 2001 included no-action as well as action traffic analyses.

### **3.4.3 Background CO Levels**

There is an ambient level of CO in the atmosphere that remains fairly constant in a particular area or region. This level is what is referred to as "background". To fully estimate the potential impact of CO for comparison to the NAAQS project estimated concentrations of CO are added to the background level. In lieu of actual CO monitoring data for the project area the EPA recommended default values of 5.0 ppm and 3.5 ppm for the one-hour and eight-hour periods respectively were used. In addition, the EPA recommended default persistent factor of 0.7 was used to obtain eight-hour CO values from one-hour model predicted concentrations.

### **3.4.4 Model Description**

CO impacts were predicted using two EPA approved models; MOBILE5a to estimate motor vehicle tailpipe emissions; and CAL3QHC (version 2) to calculate CO concentrations based on pollutant dispersion. Emission rates generated by MOBILE5a were used as input to the CAL3QHC (Version 2) line source dispersion model to predict CO concentrations at select sensitive receptors along sections of the roadway approaching and departing each intersection analyzed.

#### ***MOBILE5a***

The MOBILE5a model develops composite vehicular emission factors, in grams per mile, for free flow roadway segments or links. However, MOBIL5a does not calculate idle emission factors. Idle factors are obtained by modeling a speed of 2.5 miles per hour (mph) and multiplying the resultant emission rate, in grams per mile, by 2.5 mph to obtain an idle emission rate in grams per hour.

Emission factors are a function of fleet mix, operating mode distributions, state and local mobile source emission control programs, travel speeds and ambient temperature. A summary of MOBILE5a input parameters are presented in Table 4.

MOBILE5a permits the user to take credit for local and statewide motor vehicle emission control reduction strategies such as inspection and maintenance (I/M) programs, anti-tampering programs (ATP) and fuel volatility regulations (RVP). The results of the MOBILE5a model runs were input into the CAL3QHC model.

An ambient temperature range of 30°F to 50°F was used in the MOBILE5a model to calculate CO emission rates for the winter season, since CO emissions increase dramatically in cold weather. This is due to cars needing more fuel to start at cold temperatures and because certain emissions control devices such as oxygen sensors and catalytic converters operate less efficiently when they are cold.

**Table 4**  
**Summary of MOBILE5a Input Modeling Parameters**

Registration Distribution:	Supplied by COG
Vehicle Mix:	Supplied by COG
Vehicle Operating Mode Phases:	20.6/27.3/20.6
Vehicle Speeds:	27 mph (arterial Class III)
Ambient Temperature:	Model Calculated by range (min 30 F; max 50 F)
Hydrocarbon Emission Composition:	Carbon Monoxide (CO) only
Reid Vapor Pressure(Period ½):	12.9/12.9 psi (period 2 start year 2020)
Inspection / Maintenance Program 1/ Program2:	
- Start Year	1983 / 1983
- Stringency Level	40% / 40%
- First Model Year Covered	1968 / 1981
- Last Model Year Covered	2020 / 2020
- Waiver Rate (pre-1981)	3% / 3 %
- Waiver Rate (1981 +)	3% / 3%
- Compliance Rate	96% / 96%
- Program Type	Test Only / Test Only
- Inspection Frequency	Biennial / Biennial
- Vehicle Types Covered	LDGV - LDGT1 - LDGT2 / LDGV - LDGT1 - LDGT2
- Test Type	2500 rpm idle / IM240
Pressure and Purge Tests:	
- Start Year	1983
- First Model Year Covered	1975 pressure; 1981 purge
- Last Model Year Covered	2020
- Vehicle Types Covered	LDGV - LDGT1 - LDGT2
- Program Type	Test Only
- Inspection Frequency	Biennial
- Compliance Rate	96%
Anti-Tampering Program:	
- Start Year	1983
- First Model Year Covered	1975
- Last Model Year Covered	2020
- Compliance Rate	96%
- Air Pump Disablements	Yes
- Catalyst Removals	Yes
- Fuel Inlet Restrictor Disablements	Yes
- Tailpipe Lead Deposit Test	No
- EGR Disablement	No
- Evaporative System Disablements	No
- PCV System Disablements	No
- Missing Gas Caps	No
Stage II Vapor Recovery:	Not Modeled
Reformulated Gas:	Not Modeled
Oxy-Fuel:	Not Modeled
Source: COG, 1997	

## CAL3QHC

**Roadway Geometry** - The CAL3QHC model requires geometric inputs identifying roadway and receptor locations. Roadways must be broken down into straight segments or links with a constant width, height, traffic volume and speed. Traffic volume links were chosen to represent freeflow traffic routes and vehicle queuing locations. Freeflow roadway links are assigned X and Y coordinates to identify beginning and end points. Queue links are assigned a fixed beginning point, at the stop line, and the model assigns X, Y coordinates for the queue link endpoint based on internal calculations. Link widths equal the distance across the travel lanes plus three meters (10 feet) on either side to account for the wake-induced horizontal plume dispersion created by moving vehicles. Links are characterized as at-grade, bridge or fill segments. The X, Y and Z coordinates for all receptors are plotted on the same coordinate system. The Z coordinate for all receptors is set at 1.8 meters (6 feet), to approximate the height of an average person's nose and mouth.

A surface roughness value of 175 centimeters, the default value for city land-use (office), was used for all dispersion analysis. This input accounts for mechanical turbulence generated by air moving over surface elements. An increase in the amount of mechanical turbulence serves to enhance vertical and horizontal dispersion of pollutants in the surface layer. Input variables for CAL3QHC are summarized in Table 5. The complete CO Modeling results are contained in Table 6.

**Traffic Inputs** - Traffic volumes for the study were obtained from the report "*Washington Navy Yard Traffic Management Plan Update*" which was prepared by Gorove/Slade Associates, Inc. dated 12/03/96. To account for directional changes in peak hour traffic flow, traffic volumes for both the AM and PM peak hours were modeled.

The CAL3QHC model requires the total signal cycle length and total red time for each phase in order to calculate vehicle delays and resultant emissions. Traffic signal cycle data used in the air quality modeling study were extracted from the Level of Service analyses conducted by Gorove/Slade for the above referenced traffic management plan.

**Receptor Selection** - Receptor locations were chosen based on their proximity to the intersection and roadway modeled. Receptors were located along the approach and departures of the intersections, along the roadway right-of-way at distances of 50 feet and 100 feet, and at each corner of the intersection.

**Table 5**  
**Summary of CAL3QHC Input Modeling Parameters**

Site Geometry:	Area Mapping
Traffic Data:	AM & PM Peak Hour Volumes
Receptor Height	6 feet (1.8 meters)
Averaging Period	60 minutes (1 hr)
Meteorology:	- Wind Speed 1 meter per second - Atmospheric Stability D (4) - Mixing Height 1000 meters - Wind Angle 2° Increments for 360°
Surface Roughness:	175 cm. (city land use: office)
Vehicle Speed:	27 mph (arterial class III)
1-Hr to 8-Hr Persistence Factor:	0.7
Background CO Values (1-hr/8-hr):	5.0 / 3.5 ppm

Source: Louis Berger & Associates, 1997.



Table 6 Complete CO Modeling Results.

## CO Background Concentrations

1-hour background CO	5.0 ppm
8-hour background CO	3.5 ppm
Persistence factor	0.7

## M St. S.E. &amp; 11th St. S.E. AM Peak Traffic Volumes

Microscale CO Modeling Results AM Peak Traffic Volumes.

Receptor	1996 Existing			2001 No-Build			2001 Build		
	modeled	1-hr w/bg	8-hr w/bg	modeled	1-hr w/bg	8-hr w/bg	modeled	1-hr w/bg	8-hr w/bg
1	2.5	7.5	5.3	2.1	7.1	5.0	2.2	7.2	5.0
2	2.5	7.5	5.3	2.0	7.0	4.9	2.2	7.2	5.0
3	2.7	7.7	5.4	2.3	7.3	5.1	2.3	7.3	5.1
4	3.4	8.4	5.9	3.2	8.2	5.7	3.0	8.0	5.6
5	2.0	7.0	4.9	1.9	6.9	4.8	1.9	6.9	4.8
6	1.6	6.6	4.6	1.4	6.4	4.5	1.4	6.4	4.5
7	1.3	6.3	4.4	1.2	6.2	4.3	1.1	6.1	4.3
8	1.3	6.3	4.4	1.2	6.2	4.3	1.1	6.1	4.3
9	1.5	6.5	4.6	1.3	6.3	4.4	1.4	6.4	4.5
10	1.9	6.9	4.8	1.6	6.6	4.6	1.7	6.7	4.7
11	2.5	7.5	5.3	2.4	7.4	5.2	2.2	7.2	5.0
12	2.2	7.2	5.0	2.0	7.0	4.9	1.9	6.9	4.8
13	1.9	6.9	4.8	1.9	6.9	4.8	1.7	6.7	4.7
14	2.0	7.0	4.9	1.9	6.9	4.8	1.8	6.8	4.8
15	2.5	7.5	5.3	2.1	7.1	5.0	2.7	7.7	5.4
16	2.9	7.9	5.5	2.5	7.5	5.3	2.8	7.8	5.5
17	2.6	7.6	5.3	2.3	7.3	5.1	2.7	7.7	5.4
18	2.7	7.7	5.4	2.3	7.3	5.1	2.5	7.5	5.3
19	2.3	7.3	5.1	2.0	7.0	4.9	2.0	7.0	4.9
20	2.2	7.2	5.0	2.0	7.0	4.9	1.9	6.9	4.8
21	2.2	7.2	5.0	1.9	6.9	4.8	1.8	6.8	4.8
22	2.9	7.9	5.5	2.8	7.8	5.5	2.6	7.6	5.3
23	3.4	8.4	5.9	2.8	7.8	5.5	2.9	7.9	5.5
24	3.4	8.4	5.9	2.8	7.8	5.5	2.8	7.8	5.5
25	3.7	8.7	6.1	3.1	8.1	5.7	3.5	8.5	6.0
26	1.9	6.9	4.8	1.8	6.8	4.8	2.1	7.1	5.0
27	3.5	8.5	6.0	2.9	7.9	5.5	3.2	8.2	5.7
28	1.8	6.8	4.8	1.6	6.6	4.6	1.8	6.8	4.8
Maximum Value	3.7	8.7	6.1	3.2	8.2	5.7	3.5	8.5	6.0



Table 6 Complete CO Modeling Results.

## M St. S.E. &amp; 11th St. S.E. PM Peak Traffic Period

Microscale CO Modeling Results PM Peak Traffic Volumes.									
Receptor	1996 Existing			2001 No-Build			2001 Build		
	modeled	1-hr w/bg	8-hr w/bg	modeled	1-hr w/bg	8-hr w/bg	modeled	1-hr w/bg	8-hr w/bg
1	2.6	7.6	5.3	2.3	7.3	5.1	2.4	7.4	5.2
2	3.0	8.0	5.6	2.5	7.5	5.3	2.6	7.6	5.3
3	3.0	8.0	5.6	2.6	7.6	5.3	2.6	7.6	5.3
4	3.6	8.6	6.0	3.2	8.2	5.7	3.6	8.6	6.0
5	2.2	7.2	5.0	1.9	6.9	4.8	2.5	7.5	5.3
6	1.9	6.9	4.8	1.7	6.7	4.7	2.0	7.0	4.9
7	1.5	6.5	4.6	1.5	6.5	4.6	1.8	6.8	4.8
8	1.5	6.5	4.6	1.5	6.5	4.6	1.7	6.7	4.7
9	1.8	6.8	4.8	1.6	6.6	4.6	1.9	6.9	4.8
10	2.0	7.0	4.9	1.8	6.8	4.8	2.4	7.4	5.2
11	2.4	7.4	5.2	2.2	7.2	5.0	2.8	7.8	5.5
12	2.2	6.8	4.8	2.1	7.1	5.0	2.5	7.5	5.3
13	1.8	6.6	4.6	1.5	6.5	4.6	2.1	7.1	5.0
14	1.6	7.0	4.9	1.5	6.5	4.6	1.6	6.6	4.6
15	2.0	7.7	5.4	1.8	6.8	4.8	2.3	7.3	5.1
16	2.7	7.9	5.5	2.6	7.6	5.3	2.6	7.6	5.3
17	2.9	7.5	5.3	2.6	7.6	5.3	2.6	7.6	5.3
18	2.5	7.3	5.1	2.3	7.3	5.1	2.2	7.2	5.0
19	2.3	7.4	5.2	2.0	7.0	4.9	2.3	7.3	5.1
20	2.4	7.0	4.9	2.1	7.1	5.0	2.2	7.2	5.0
21	2.0	7.3	5.1	2.1	7.1	5.0	2.1	7.1	5.0
22	2.3	8.3	5.8	2.8	7.8	5.5	3.0	8.0	5.6
23	3.3	8.2	5.7	2.7	7.7	5.4	3.1	8.1	5.7
24	3.2	8.2	5.7	2.6	7.6	5.3	3.2	8.2	5.7
25	3.2	6.6	4.6	2.7	7.7	5.4	3.4	8.4	5.9
26	1.6	8.1	5.7	1.3	6.3	4.4	1.9	6.9	4.8
27	3.1	6.5	4.6	2.6	7.6	5.3	2.7	7.7	5.4
28	1.5	8.6	6.0	1.4	6.4	4.5	1.5	6.5	4.6
Maximum Value	3.6	8.6	6.0	3.2	8.2	5.7	3.4	8.6	6.0

Table 6 Complete Co Modeling Results

## CO Background Concentrations

1-hour background CO 5.0 ppm

8-hour background CO 3.5 ppm

Persistence factor 0.7

## N St. S.E. &amp; 11th St. S.E. AM Peak Traffic Volumes

Receptor	Microscale CO Modeling Results AM Peak Traffic Volumes.									
	1996 Existing				2001 No-Build				2001 Build	
	modeled	1-hr w/bg	8-hr w/bg	modeled	modeled	1-hr w/bg	8-hr w/bg	modeled	1-hr w/bg	8-hr w/bg
1	0.5	5.5	3.9	0.5	0.5	5.5	3.9	0.5	5.5	3.9
2	0.7	5.7	4.0	0.9	0.9	5.9	4.1	0.5	5.5	3.9
3	0.8	5.8	4.1	1.0	1.0	6.0	4.2	0.8	5.8	4.1
4	1.4	6.4	4.5	1.3	1.3	6.3	4.4	1.2	6.2	4.3
5	1.1	6.1	4.3	1.0	1.0	6.0	4.2	1.0	6.0	4.2
6	0.9	5.9	4.1	0.8	0.8	5.8	4.1	0.7	5.7	4.0
7	0.8	5.8	4.1	0.7	0.7	5.7	4.0	0.8	5.8	4.1
8	0.9	5.9	4.1	0.9	0.9	5.9	4.1	0.8	5.8	4.1
9	1.0	6.0	4.2	0.9	0.9	5.9	4.1	0.8	5.8	4.1
10	1.5	6.5	4.6	1.2	1.2	6.2	4.3	1.1	6.1	4.3
11	2.5	7.5	5.3	2.1	2.1	7.1	5.0	2.2	7.2	5.0
12	1.8	6.8	4.8	1.4	1.4	6.4	4.5	1.2	6.2	4.3
13	1.0	6.0	4.2	0.9	0.9	5.9	4.1	0.7	5.7	4.0
14	0.7	5.7	4.0	0.7	0.7	5.7	4.0	0.5	5.5	3.9
15	0.7	5.7	4.0	0.6	0.6	5.6	3.9	0.5	5.5	3.9
16	1.0	6.0	4.2	0.8	0.8	5.8	4.1	0.7	5.7	4.0
17	1.6	6.6	4.6	1.4	1.4	6.4	4.5	1.2	6.2	4.3
18	2.0	7.0	4.9	1.7	1.7	6.7	4.7	1.7	6.7	4.7
19	1.7	6.7	4.7	1.5	1.5	6.5	4.6	1.4	6.4	4.5
20	1.6	6.6	4.6	1.5	1.5	6.5	4.6	1.4	6.4	4.5
21	1.1	6.1	4.3	1.1	1.1	6.1	4.3	0.9	5.9	4.1
22	1.0	6.0	4.2	1.0	1.0	6.0	4.2	0.9	5.9	4.1
23	1.4	6.4	4.5	1.2	1.2	6.2	4.3	1.3	6.3	4.4
24	2.2	7.2	5.0	1.6	1.6	6.6	4.6	1.8	6.8	4.8
25	2.2	7.2	5.0	1.8	1.8	6.8	4.8	1.7	6.7	4.7
26	1.1	6.1	4.3	0.9	0.9	5.9	4.1	0.9	5.9	4.1
27	0.8	5.8	4.1	1.1	1.1	6.1	4.3	0.6	5.6	3.9
28	0.6	5.6	3.9	0.6	0.6	5.6	3.9	0.5	5.5	3.9
Maximum Value	2.5	7.5	5.3	2.1	2.1	7.1	5.0	2.2	7.2	5.0

Table 6 Complete Co Modeling Results

## N St. S.E. &amp; 11th St. S.E. PM Peak Traffic Period

Receptor	Microscale CO Modeling Results PM Peak Traffic Volumes.									
	1996 Existing			2001 No-Build			2001 Build			
	modeled	1-hr w/bg	8-hr w/bg	modeled	1-hr w/bg	8-hr w/bg	modeled	1-hr w/bg	8-hr w/bg	modeled
1	1.1	6.1	4.3	0.9	5.9	4.1	0.7	5.7	4.0	0.7
2	1.4	6.4	4.5	1.2	6.2	4.3	0.8	5.8	4.1	0.8
3	1.6	6.6	4.6	1.3	6.3	4.4	1.3	6.3	4.4	1.3
4	2.3	7.3	5.1	1.9	6.9	4.8	1.8	6.8	4.8	1.8
5	1.7	6.7	4.7	1.5	6.5	4.6	1.5	6.5	4.6	1.5
6	1.5	6.5	4.6	1.3	6.3	4.4	1.3	6.3	4.4	1.3
7	1.5	6.5	4.6	1.3	6.3	4.4	1.2	6.2	4.3	1.2
8	1.5	6.5	4.6	1.3	6.3	4.4	1.3	6.3	4.4	1.3
9	1.5	6.5	4.6	1.3	6.3	4.4	1.3	6.3	4.4	1.3
10	1.6	6.6	4.6	1.4	6.4	4.5	1.4	6.4	4.5	1.4
11	2.0	7.0	4.9	1.7	6.7	4.7	1.9	6.9	4.8	1.9
12	1.0	6.0	4.2	0.8	5.8	4.1	0.7	5.7	4.0	0.7
13	0.6	5.6	3.9	0.5	5.5	3.9	0.5	5.5	3.9	0.5
14	0.5	5.5	3.9	0.4	5.4	3.8	0.4	5.4	3.8	0.4
15	0.6	5.6	3.9	0.5	5.5	3.9	0.4	5.4	3.8	0.4
16	0.6	5.6	3.9	0.6	5.6	3.9	0.6	5.6	3.9	0.6
17	1.0	6.0	4.2	0.9	5.9	4.1	0.8	5.8	4.1	0.8
18	1.7	6.7	4.7	1.4	6.4	4.5	1.4	6.4	4.5	1.4
19	1.8	6.8	4.8	1.5	6.5	4.6	1.5	6.5	4.6	1.5
20	1.7	6.7	4.7	1.5	6.5	4.6	1.4	6.4	4.5	1.4
21	1.7	6.7	4.7	1.4	6.4	4.5	1.4	6.4	4.5	1.4
22	1.5	6.5	4.6	1.2	6.2	4.3	1.2	6.2	4.3	1.2
23	1.4	6.4	4.5	1.2	6.2	4.3	1.2	6.2	4.3	1.2
24	1.4	6.4	4.5	1.2	6.2	4.3	1.2	6.2	4.3	1.2
25	1.6	6.6	4.6	1.3	6.3	4.4	1.3	6.3	4.4	1.3
26	1.1	6.1	4.3	1.0	6.0	4.2	1.0	6.0	4.2	1.0
27	2.2	7.2	5.0	1.8	6.8	4.8	0.9	5.9	4.1	0.9
28	0.8	5.8	4.1	0.7	5.7	4.0	0.5	5.5	3.9	0.5
Maximum Value	2.3	7.3	5.1	1.9	6.9	4.8	1.4	6.9	4.8	1.4

### 3.4 Analyses Findings

The results of the emissions analysis are summarized in Table 9. A complete listing of calculation estimates and results are contained in Tables 10 and 11. These results are annual emission levels and result primarily from the operation of motor vehicles. During the first three years emissions are expected to be from construction activities. As the project nears completion, construction related emissions will diminish and operation emissions gradually increase. While the full amount of both construction and operation related emissions could not occur in the same year, the total of both is still below *de minimis* levels.

The primary source of emissions for the action during operation will be the exhaust from motor vehicles traveling to and from the site. Emissions from these vehicle trips could directly impact nearby public housing developments as the vehicles travel past, or idle in front of, the developments. This impact would be of concern to the infirm, elderly, and young who occupy such developments, since their lungs are most susceptible to irritation from elevated levels of pollutants. The action attributable emissions however, would be somewhat insignificant in comparison to the total amount of emissions from other sources in the project area.

Construction emissions are related to the operation of heavy equipment, delivery vehicles, and paints. Based on procedures established in the Conformity regulations and other EPA and Navy guidance, it is estimated that no more than 12.2 tpy of CO, 14.5 tpy of VOC and 35.2 tpy of NO<sub>x</sub> will be generated through construction related activities associated with the proposed action.

Operation emissions associated with the BRAC relocation would be generated by employee trips, delivery vehicle travel, and visitor vehicle travel. These emissions were identified as 49.2 tpy of CO, 6.3 tpy of VOC and 8.6 tpy of NO<sub>x</sub>, and are based on annual distance traveled and number of vehicles used.

As a commitment towards further reducing emissions of pollutants from motor vehicles the Navy promotes van and car pools, as well as other means to reduce the number of individual vehicle trips to the project location. In addition, all new sources of fuel combustion installed as part of the action (i.e. to heat and cool buildings) will use clean burning fuels such as natural gas whenever possible. These emission units will also meet all applicable pollution control measures for such devices as stipulated in the SIP and air pollution control regulations.

The hot-spot modeling results indicate that the highest 8-hour CO value of 6.1 parts per million (ppm) will occur at the M St. and 11th St. intersection during the AM peak traffic period in the existing year 1996. The highest concentration with the planned action in the year 2001 is 6.0 ppm and is also predicted to occur at the M St. and 11th St. intersection. There were no predicted CO concentrations which exceeded either the 1-hour or 8-hour NAAQS of 35 ppm and 9.0 ppm respectively in the year 1996 or 2001.

Overall, CO concentrations are predicted to remain relatively stable from 1996 to 2001 with no predicted increases. A comparison of the No-Action to the Action in 2001 indicates no change in predicted CO levels at the N St. and 11th St. intersection, in either the AM or PM period. CO levels with the Action are predicted to increase over the No-Action by 0.3 ppm at the M St. and 11th St. intersection, during both the AM and PM peak traffic periods.

Table 7 summarizes the highest predicted 1-hour and 8-hour concentrations at each intersection for the AM peak traffic period, while Table 8 summarizes the highest CO values predicted during the PM peak period.

**Table 7**  
**Highest Predicted Carbon Monoxide Concentrations - AM Peak Period**

Alternative	CO Concentration <sup>a</sup>	
	1-hr	8-hr
M Street SE and 11th Street SE		
1996 Existing	8.7	6.1
2001 No-Build	8.2	5.7
2010 Build	8.5	6.0
N Street SE and 11th Street SE		
1996 Existing	7.5	5.3
2001 No-Build	7.1	5.0
2010 Build	7.2	5.0

<sup>a</sup> Values are in parts per million (ppm); includes a background concentration of 5.0 ppm (1-hr) and 3.5 ppm (8-hr).  
Source: Louis Berger & Associates, Inc. 1997.

**Table 8**  
**Highest Predicted Carbon Monoxide Concentrations - PM Peak Period**

Alternative	CO Concentration <sup>a</sup>	
	1-hr	8-hr
M Street SE and 11th Street SE		
1996 Existing	8.6	6.0
2001 No-Build	8.2	5.7
2010 Build	8.6	6.0
N Street SE and 11th Street SE		
1996 Existing	7.3	5.1
2001 No-Build	6.9	4.8
2010 Build	6.9	4.8

<sup>a</sup> Values are in parts per million (ppm); includes a background concentration of 5.0 ppm (1-hr) and 3.5 ppm (8-hr).  
NAAQS Values: one-hour = 35.0 ppm, eight-hour = 9.0 ppm  
Source: Louis Berger & Associates, Inc. 1997

The Action is not predicted to cause any violations of the one-hour (35 ppm) or the eight-hour (9 ppm) NAAQS for CO in the Action year of 2001 under the Build Alternative. It also meets the basic requirements of the State and Federal Clean Air Acts in that:

- It will not cause or contribute to any new violation of the NAAQS for CO;
- It will not increase the frequency or severity of any existing violations of the NAAQS for CO; and
- It will not delay the timely attainment of the NAAQS CO.

Based on these conclusions the action meets the conformity requirements set forth by the EPA under the CAAA of 1990 and is determined to conform to the SIP.

The annual rate of emissions for both construction and operations are well below threshold levels established in the Conformity regulations and are therefore, not expected to significantly affect attainment of SIP goals or regional air quality.

**Table 9**  
**Summary of Annual Emissions and Comparison to *de minimis* Values**

Pollutant	Construction (tpy)	Operation (tpy)	De Minimis (tpy)
CO	12.2	49.2	100
VOC	14.5	6.3	50
NOx	35.2	8.6	50

Source: Louis Berger & Associates, Inc. 1997

Table 10

**Washington Navy Yard - 1995 BRAC Action  
Calculation of Yearly Emissions from Construction Activities**

**Construction Equipment (assumed the same for all alternatives)**

Assumed number of construction vehicles operating per day: 20  
 Number of Construction Hours per day: 8  
 Number of work days per year: 240  
 Total hours per year for construction equipment use: 38,400 hrs/yr

Pollutant	lb/hr*	lb/yr	tons/yr
VOC	0.154	5,914	2.96
CO	0.629	24,154	12.08
NOx	1.835	70,464	35.23

\*AP-42 Volume II: Mobile Sources (Composite emissions for 9 construction vehicle types)

**Construction Delivery Vehicles (assumed the same for all alternatives)**

Assumed round trip mileage: 1 miles (from gate to site and return to gate)  
 Number of Vehicle trips per day: 20 trips per day  
 Total yearly Mileage for delivery vehicles: 4,800 miles/yr

Pollutant	g/mile*	kg/year	lb/yr	tons/yr
VOC	1.81	8.69	19.16	0.01
CO	14.03	67.34	148.49	0.07
NOx	2.38	11.42	25.19	0.01

\*Mobile5a; 1996; 30 mph

**Construction Paint Use (assumed the same for all alternatives)**

Paint Coverage 400 ft<sup>2</sup>/gal  
 Paint VOC content 3 lbs/gal (assumes water based paint)  
 Number of paint coats 3 one primer plus two finish coats  
 Number of Parking Spaces 1500 parking spaces

Surface to be painted	Total Paintable Surface Area (ft <sup>2</sup> )	Paint use (gals)	Total VOC Emissions (lbs)	Total VOC Emissions (tons/yr)
Wall Space	1,007,000	7,553	22,658	11.33
Parking Lines	18,750	141	422	0.21
			Total	11.54

Paintable area parking lines = (#of parking spaces/2) x 25 ft<sup>2</sup> of painted line per every two spaces.

**Construction Emissions Summary (assumed the same for all alternatives)**

Pollutant	Equipment	Delivery	Paint Use	Total
VOC	2.96	0.01	11.54	14.51
CO	12.08	0.07		12.15
NOx	35.23	0.01		35.24

Conversions: 1 kilogram (kg) = 1000 grams (g)

1 kg = 2.20 pounds (lb)

1 ton = 2000 lbs

Table 11

# **Washington Navy Yard - 1995 BRAC Action** **Calculation of Yearly Emissions from Operation Activities**

Emissions were calculated for the following categories of Operation emissions:

Worker vehicle trips  
 Delivery Vehicles

**Assumptions (it is assumed that all alternatives are the same)**

Number of work days per year: 240 days/year  
 Full buildout occupancy year: 1999  
 Average vehicle speed: 30 miles per hour (mph)

## **Worker Trips**

Assumed number of new vehicle trips to site: 1,470 vehicle trips  
 Assumed worker mileage (round trip)\*: 10 miles/day  
 Yearly worker trip mileage: 3,528,000 miles per year

\*Round trip based on a road distance of 5 miles from Crystal City to WNY

## **Annual Emissions from Worker Vehicles**

Pollutant	g/mile**	kg/year	lb/yr	tons/yr
VOC	1.55	5,468	12,058	6.03
CO	12.10	42,689	94,129	47.06
NOx	2.12	7,479	16,492	8.25

\*\*Mobile5a; 1999; 30 mph

## **Delivery Vehicle Trips**

Assumed round trip mileage: 1 miles (site gate to site and back to gate)  
 Number of Vehicle trips per day: 20 trips per day  
 Total yearly Mileage for delivery vehicles: 4,800 miles/yr

## **Annual Emissions from Deliveries**

Pollutant	g/mile**	kg/year	lb/yr	tons/yr
VOC	1.55	7	16	0.01
CO	12.10	58	128	0.06
NOx	2.12	10	22	0.01

\*\*Mobile5a; 1999; 30 mph

## **Visitor Vehicle Trips**

Assumed round trip mileage: 1 miles (site gate to site and back to gate)  
 Number of Vehicle trips per day: 638 trips per day  
 Total yearly Mileage for delivery vehicles: 153,120 miles/yr

## **Annual Emissions from Deliveries**

Pollutant	g/mile**	kg/year	lb/yr	tons/yr
VOC	1.55	237	523	0.26
CO	12.10	1,853	4,085	2.04
NOx	2.12	325	716	0.36

\*\*Mobile5a; 1999; 30 mph

## **Summary of Operation Emissions**

Pollutant	Worker	Delivery	Visitor	Total
VOC	6.03	0.01	0.26	6.30
CO	47.06	0.06	2.04	49.17
NOx	8.25	0.01	0.36	8.62

Conversions: 1 kilogram (kg) = 1000 grams (g)

1 kg = 2.20 pounds (lb)

1 ton = 2000 lbs

## 5.0 References

Code of Federal Regulations 40, Part 50, *National Primary and Secondary Ambient Air Quality Standards*.

Code of Federal Regulations 40, Part 93, Subpart B: *Determining Conformity of Federal Actions to State or Federal Implementation Plans*.

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U.S. Environmental Protection Agency. 1995. *User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections*. EPA-454/R-92-006. Research Triangle Park, North Carolina. September.

U.S. Environmental Protection Agency, Office of Air & Radiation. 1994. *Users Guide to MOBILE5a*. EPA-AA-AQAB-94-01. May.



## APPENDIX B

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**WASHINGTON NAVY YARD  
TRAFFIC MANAGEMENT PLAN UPDATE**

DEPARTMENT OF THE NAVY  
1995  
BASE REALIGNMENT  
AND  
CLOSURE ACTION

NAVAL SEA SYSTEMS COMMAND

WASHINGTON NAVY YARD  
WASHINGTON, D.C.

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APPENDICES

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APPENDIX B:	Detailed Layout of Existing Parking Spaces of the Navy Yard, by Sections
APPENDIX C:	Criteria and Description of Levels of Service (LOS) for Signalized Intersections, Two-Way Stop-Controlled Intersections and All-Way Stop-Controlled Intersections
APPENDIX D:	AM, Mid-Day, and PM Peak Hour Intersection Capacity and LOS Analysis Summary for 1995 Existing Conditions
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APPENDIX F:	Detailed Internal Circulation Analysis of the Western Portion of the Washington Navy Yard

With the enactment of the Base Realignment and Closure Act, Congress established an elaborate process designed to reduce military assets and expenditures in response to the need for prudent Federal spending and to the end of the Cold War. Upon review and approval by Congress and the President, the resulting closures and realignments become acts of law with specific implementation actions scheduled. As part of these decisions, approximately 5,400 Navy personnel will be relocated from various Metropolitan Washington, DC locations to the Washington Navy Yard (WNY). Since the majority of these personnel already commute to the Washington, DC area, little impact is expected to occur to regional traffic conditions. The shift within the DC area does, however, have the potential to impact local traffic conditions of the roadway network surrounding the WNY. The result of the BRAC actions will add 5,400 employees to the existing workforce of 5,400 employees at the WNY. This addition of personnel is expected to increase the total workforce at the WNY to 10,800 employees.

This Transportation Management Plan (TMP) is an update of the 1995 WNY TMP and not only focuses on existing conditions, but also analyzes the effects of both the 93/95 BRAC actions and provides recommendations to mitigate the effects of these actions. The TMP presents the projections of traffic related impacts anticipated to result from the BRAC realignment as well as several possible traffic and parking management strategies that can be implemented to reduce the anticipated traffic impacts.

## 1.0 EXISTING TRANSPORTATION CONDITIONS

This section presents the general physical and traffic flow characteristics of the existing internal and external roadways servicing the WNY site and the analysis of AM and PM peak hour traffic volumes. Also included is an evaluation of the on-site parking usage versus supply, a discussion of the observed trip rates of employees, the modal distribution, and the parking spaces per employee ratio.

### 1.1 Roadways, Traffic, Transit, and Parking

#### 1.1.1 *Adjacent Arterials*

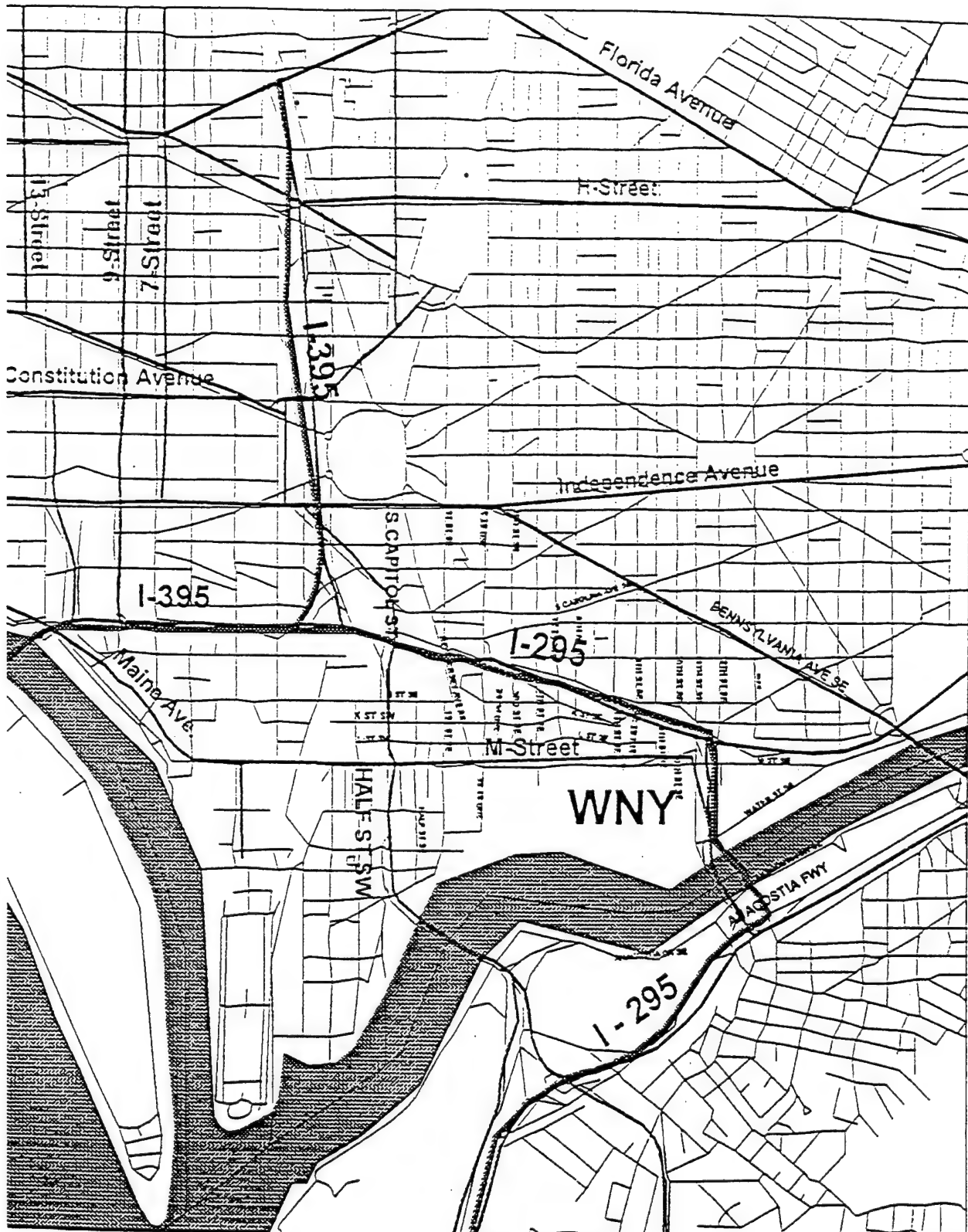
The WNY is located in the Southeast quadrant of Washington, DC. It is bordered on the south by the Anacostia River, on the north by M Street, on the east by 11th Street and access ramps to the elevated Interstate 295 (I-295) freeway, and to the west by the General Service Administration's (GSA) Southeast Federal Center (SEFC).

As shown in Figure 1.1, the WNY is easily accessed via I-295 and I-395. The current Average Daily Traffic (ADT) volumes indicate that these grade-separated arterials are heavily traveled. Based on ADT maps provided by the District in 1993, approximately 91,200 vehicles utilized I-295 per day and I-395 carries approximately 186,300 vehicles per day.

Immediate and principal access to the WNY is available from signalized intersections at M and 9th Street/Parsons Avenue (main entrance gate) and the 11th Street and N Street access gate. The



Figure 1.1, Regional/Local Roadway Network



Source: Mapitude

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9th and M Street entrance serves approximately 38% of the inbound traffic and 41% of the outbound traffic during the AM and PM peak hours, respectively. Similarly, the 11th Street and N Street gate serves approximately 55% of the inbound traffic and 35% of the outbound traffic during the AM and PM peak hours, respectively. Secondary access is provided at the Isaac Hull Avenue and Tingey Street gate, which provides direct access to and from the Southeast Federal Center. At this entrance, approximately 7% of the AM peak hour inbound traffic and 7% of the PM peak hour outbound traffic access the WNY. The signalized intersection of M Street and Isaac Hull Avenue provides egress from the WNY from 3:15 PM to 4:30 PM daily and is closed at all other times.

Descriptions of M Street and 11th Street in S.E. are as follows:

- **M Street, S.E.** is an at-grade, east-west, two-directional, six-lane divided facility, with traffic signals at major intersections and with a relatively moderate traffic volume of 13,000 to 17,000 vehicles a day, based on ADT maps provided by the District of Columbia. To the west of the WNY, M Street extends across South Capitol Street. To the east of the WNY, M Street changes character and becomes a narrow two-way street at the signalized intersection of 11th Street.
- **11th Street, S.E.** south of M Street, consists of a one-way, three-lane, southbound roadway. The left lane of this roadway provides direct access to the southbound on-ramp to the I-295 Bridge; north of M Street, 11th Street becomes a two-way undivided two-lane arterial.

### ***1.1.2 Public Transportation***

The Navy Yard Metro station on the Green line is located at 1st Street and M Streets S.E. and the Eastern Market Metro station is located at 8th Street and Pennsylvania Avenue S.E. It takes about ten minutes for an average walker from the Navy Yard Metro train platform to reach the nearest gate of the Navy Yard at Isaac Hull Avenue, and up to twenty minutes to reach the furthest gate at 11th Street and N Street. The Eastern Market Metro station has approximately the same accessibility to the WNY as the Navy Yard Metro station. From the Eastern Market Metro station, bus numbers 90 and 92 can be utilized to arrive at the WNY. Commuters can utilize a Metrobus transfer from the Metrorail to the bus for \$0.25. When leaving the WNY, utilizing the Metrobus costs \$1.10.

As shown in Figure 1.2, the WNY is served by two bus lines along M Street S.E. from the Navy Yard Metro station: Minnesota Avenue - M Line (four routes), and Anacostia - Eckington Line (two routes). Westbound bus stops are located along M Street S.E. at 4th Street, Isaac Hull Avenue, 7th Street and 10th Street, while eastbound bus stops are located at 10th Street, 8th Street, 7th Street, and 4th Street.



### 1.1.3 On-Site Access and Circulation

There are six access points to the WNY, three of which are located on M Street, two are located on 11th Street and one on Tingey Street. The main gates are located at the signalized intersections of M Street/9th Street and 11th Street/N Street. The WNY is an open military installation but a guard is posted during the operation hours of each gate to check identification. A description of each of the access points is as follows:

- The M Street/9th Street access is open 24 hours. The lane configuration is typically one lane in the inbound direction and one lane in the outbound direction. Between 3:15 PM and 4:30 PM both lanes operate in the outbound direction.
- The N Street/11th Street access lane configuration is typically two lanes in the outbound direction and one lane in the inbound direction. Between the hours of 6:30 AM to 7:45 AM this access is used for inbound traffic only.
- The M Street/8th Street or Latrobe Gate is located at a signalized intersection. The access lane configuration is one lane for both inbound and outbound traffic. This gate is restricted to WNY residents and special guests only.
- The M Street/Isaac Hull Avenue access is open between 3:15 PM - 4:30 PM with one lane operating in the inbound direction and one lane operating in the outbound direction. This intersection is signalized controlled during the time period when the WNY access is open.
- The Tingey Street/Isaac Hull Avenue access is provided via the Southeast Federal Center and is one lane inbound and one lane outbound.
- The O Street/11th Street access is not currently used.

As shown in Figure 1.3, the internal streets of the site (N Street, Harwood Street, Sicard Street, and Isaac Hull Avenue) form a major east-west, two-lane collector-distributor, that winds around the south side of a large central core area. At its eastern end, this roadway ends at the major signalized access gate of 11th Street. At its western end, it connects to the Southeast Federal Center via the minor access gate of Isaac Hull Avenue and Tingey Street.

Parsons Avenue is a two-lane north-south roadway within the WNY. Parsons Avenue crosses the east-west collector-distributor at N Street, where a traffic signal is located. Parsons Avenue begins in the north at the M Street/9th Street gate and continues southward where it feeds into several major parking lots.

East of Parsons Avenue lies a grid pattern of multi-level administrative office buildings that continues to 11th Street and includes a seven-level parking garage. In the middle of this office building zone, 10th Street, a two-lane roadway provides convenient secondary access to the area. At its north extremity, 10th Street dead-ends just short of M Street, while at its southern end it feeds into parking lots on the WNY.



The area west of Parsons Avenue and north of the major east-west corridor is served by minor streets. This area consists of two very distinct zones with no direct street link between them. The southeastern portion of this area is primarily large industrial warehouses served by a grid network of minor roadways. The northeastern portion of this section consists of landscaped open areas and sidewalks, residential buildings that face the WNY along M Street, and Navy Museum related-use buildings west of Parsons Avenue.

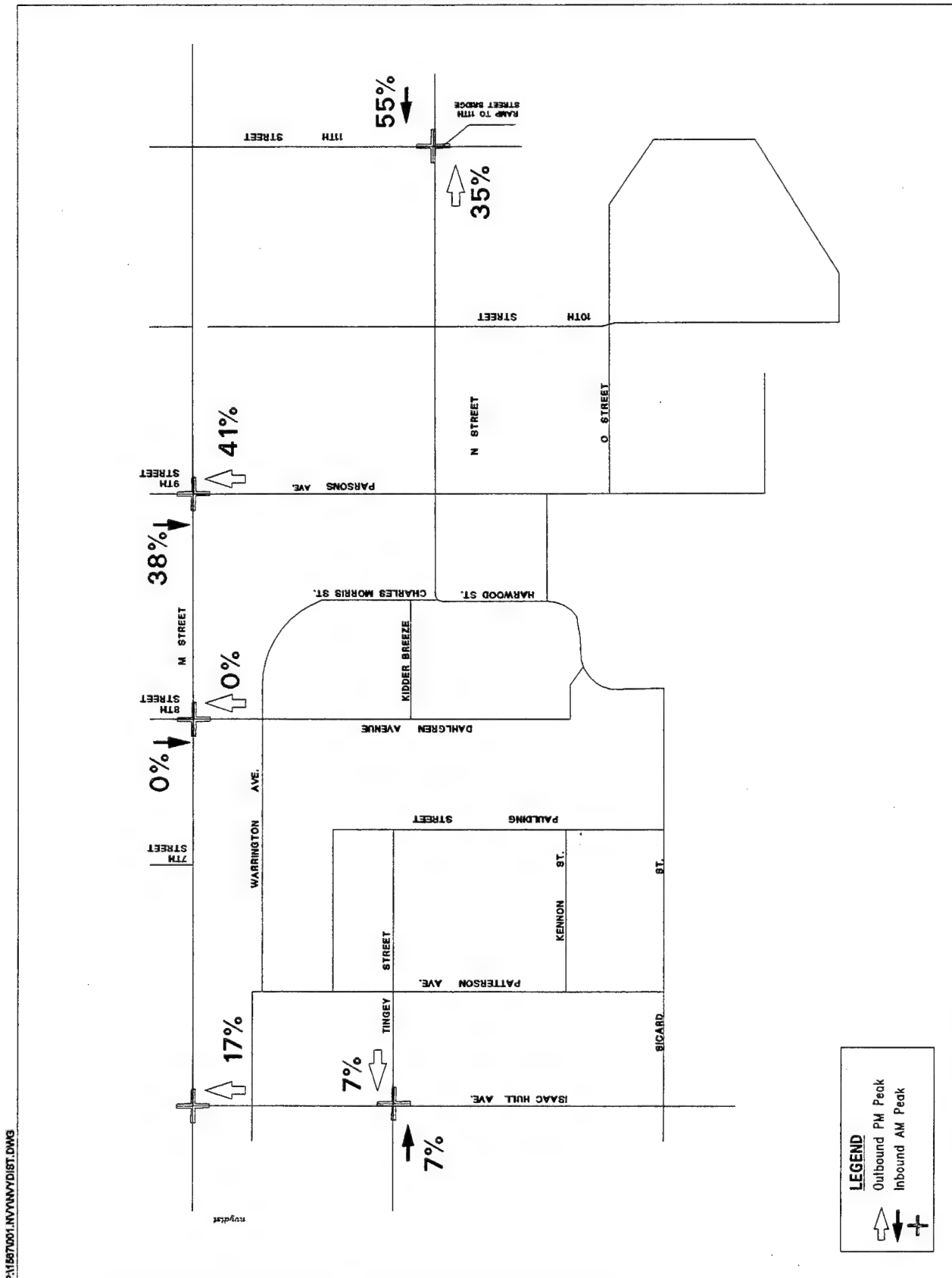
Data collected regarding access to the WNY shows that the majority of AM peak commuters enter the installation through the 11th Street gate, while employees exiting the station during the PM peak hours use the gate on 9th Street slightly more than the one on 11th Street (see Figure 1.4). It is important to note that both the AM and PM peak commuter traffic volume for WNY employees differs from the surrounding peak AM and PM commuter traffic volume (see Figure 1.5). A minor overlap of WNY and metro peak commuter hour traffic volume occurs during the PM peak.

#### ***1.1.4 On-Site Parking Supply***

There are currently 3,586 vehicle parking spaces at the WNY. Parking has been divided into seven separate zones, which are illustrated on Figure 1.6. The figure also shows the number of parking spaces available within the zone (and the percent of spaces used). Approximately 73 percent of the existing parking spaces are located on large surface lots and/or structured parking situated along the southern periphery of the installation. The remainder are dispersed throughout the installation along side streets or adjacent to buildings. Table 1.1 shows the current designation for parking at the WNY.

Four off base surface lots are also available for overflow parking at the WNY (see Figure 1.6), but these lots are seldom used.

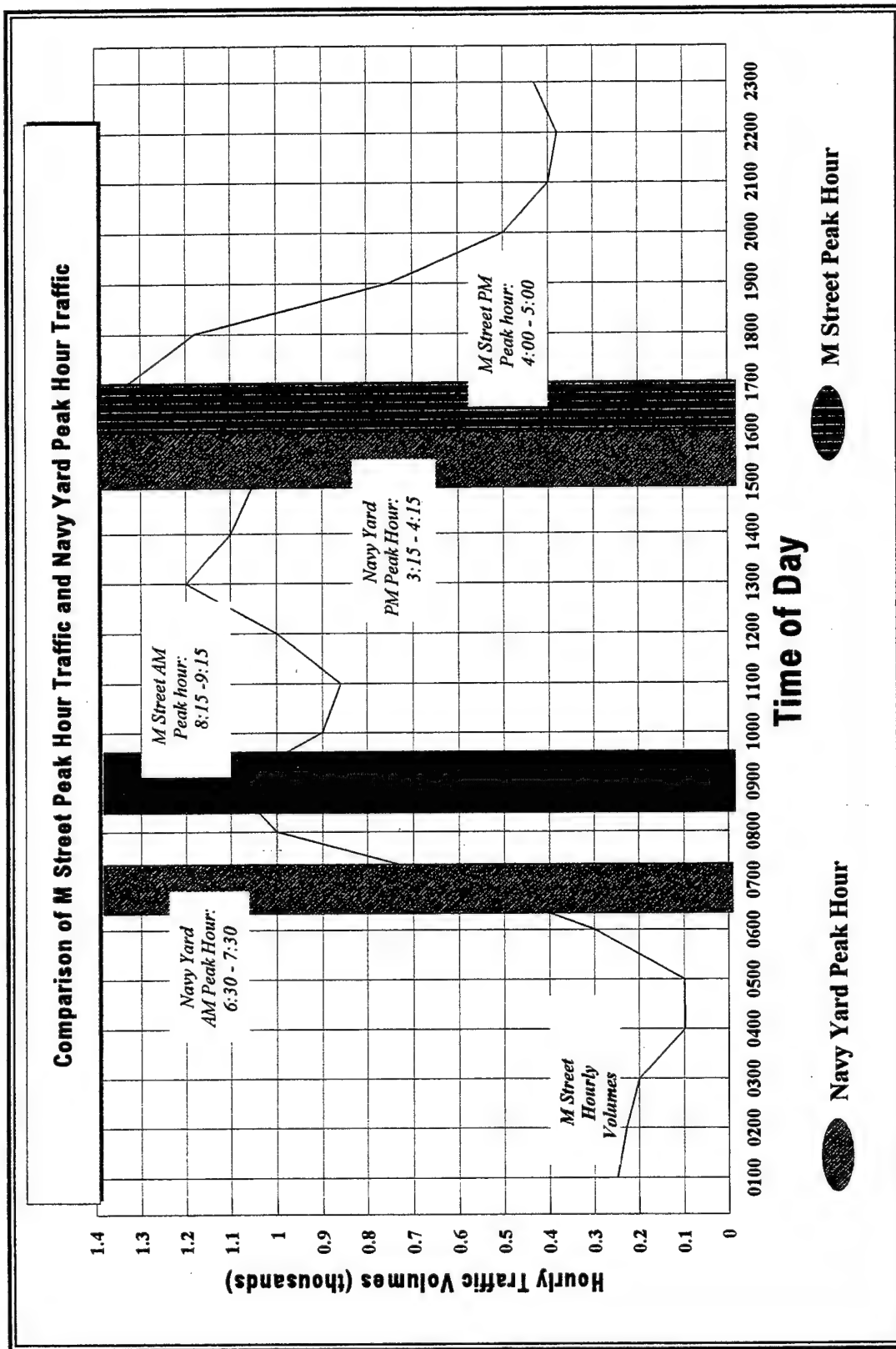
Figure 1.4, Existing Navy Yard Site Traffic Access Distribution



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Navy Yard Access Gate

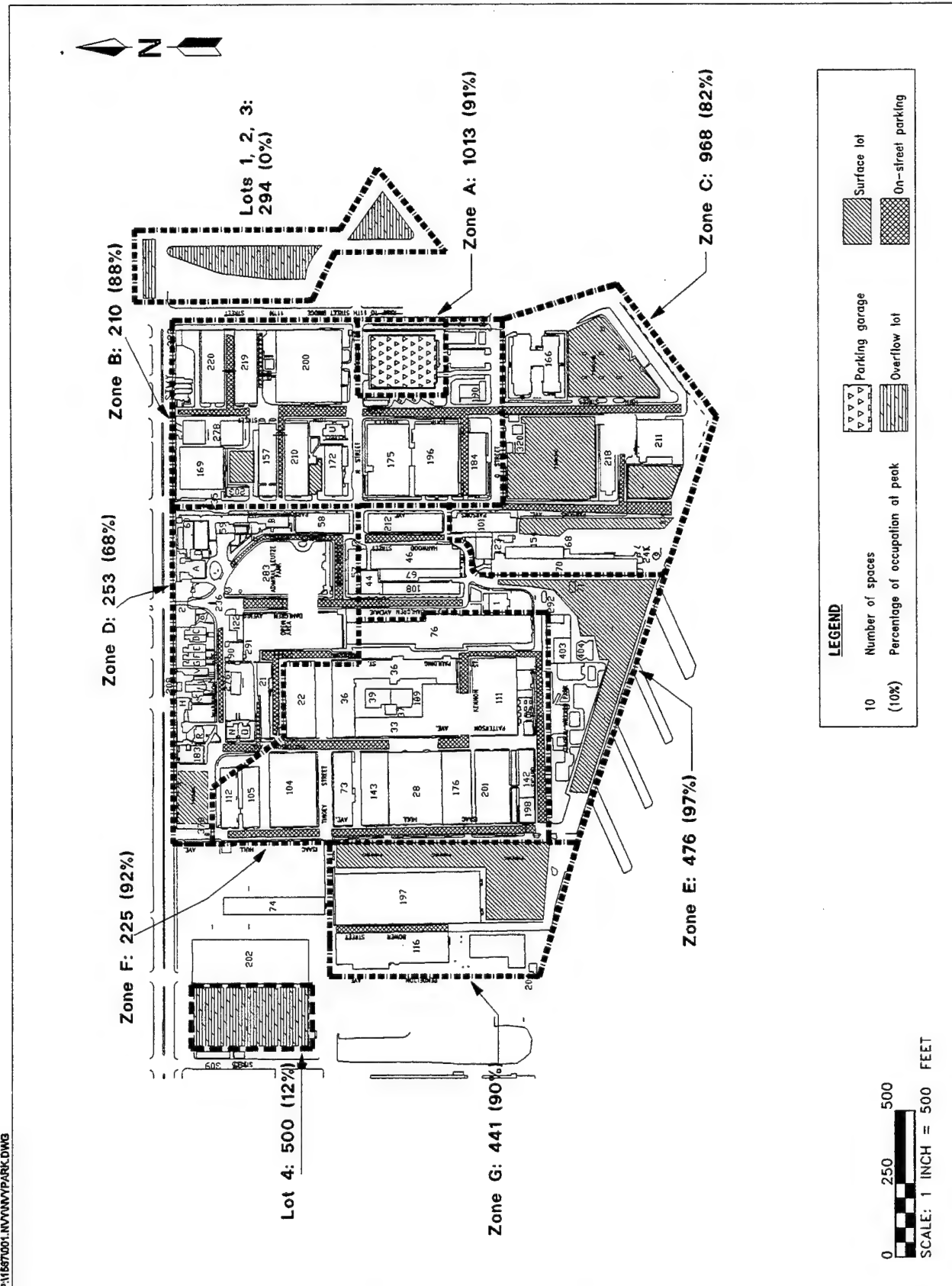
Figure 1.5, Comparison of M Street Peak Hour Traffic and Navy Yard Peak Hour Traffic



(The Navy Yard morning Peak hour is from 6:30 - 7:30 AM while the M Street Peak Hour is from 8:15 - 9:15 AM. The Navy Yard afternoon Peak hour is from 3:15 - 4:15 PM while the M Street Peak Hour is from 4:00 - 5:00 PM)



Figure 1.6, Navy Yard Site Parking Supply Distribution



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TABLE 1.1  
Existing Parking Spaces by Type

Type of Parking	Number of Spaces	% of Total
ON SITE:		
Individual Parking Spaces	1,466	41%
Reserved Assigned Parking Spaces	440	12%
Quarters (Quarters visitors)	94	2.5%
Government Vehicle Spaces	160	4.5%
Car/Van Pool Parking Spaces	858	24%
Visitors Parking Spaces	480	13.5%
Handicapped Parking Spaces	88	2.5%
Total Parking Spaces	3,586	100%
SATELLITE LOTS:		
Overflow Western Lot Number 4 (Temporary; to be displaced by Southeast Federal Center)	500	63%
Overflow Eastern Lots 1,2,3	294	37%
Total Overflow	794	100%

## 1.2 Analysis of Peak Hour Traffic Operations, Parking and Safety

### 1.2.1 Traffic Operations

A series of traffic counts were conducted, as a basis for evaluating traffic conditions of local roadways servicing the WNY. Counts were conducted at twelve intersections, which included access gates to the installation. A listing of these intersections is provided on Table 1.2.

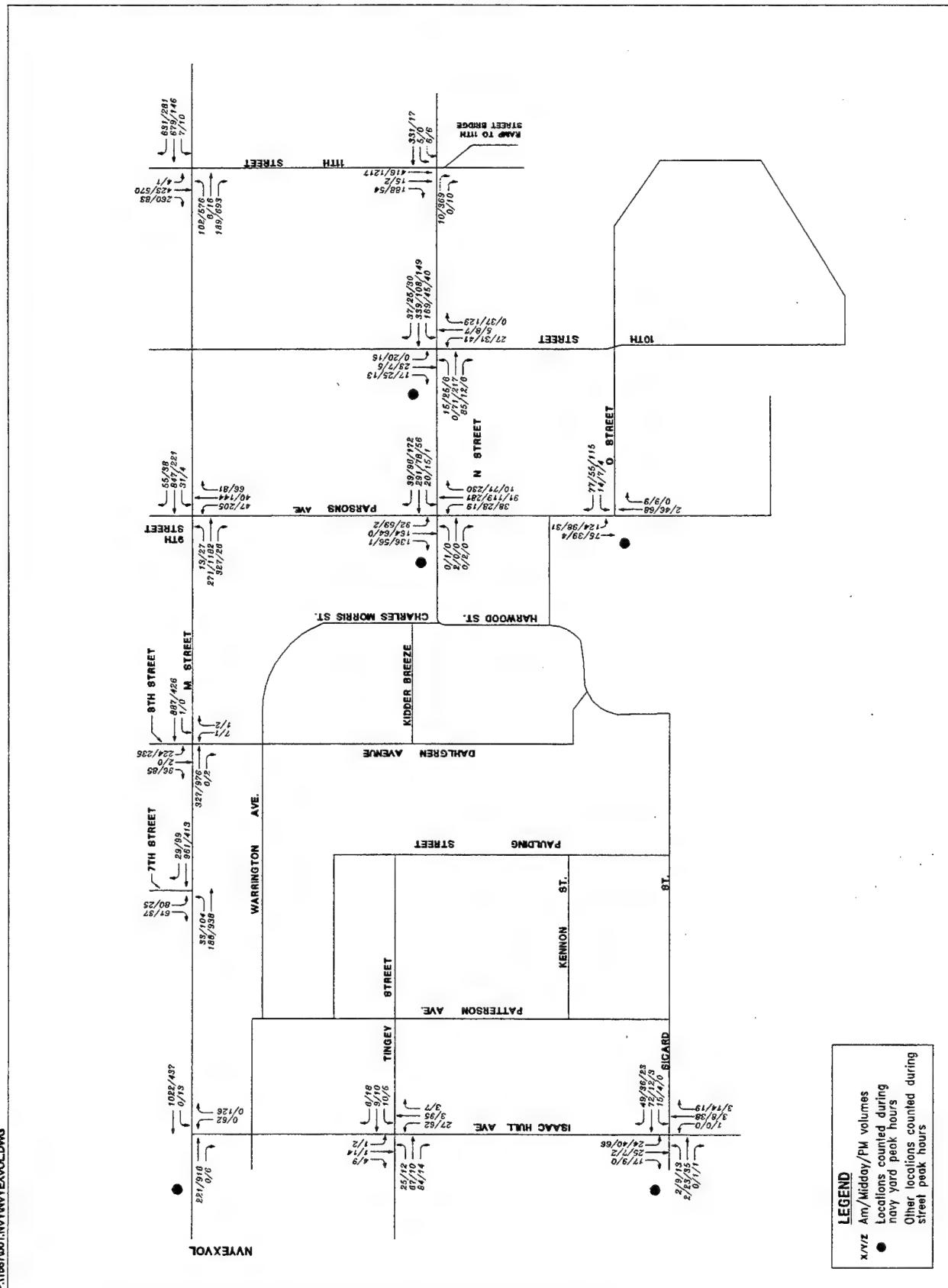
As shown in Figure 1.5 the majority of local traffic occurs during the daytime hours, with the highest levels typically occurring at 9 AM, 1 PM and 4 PM. These volumes can be attributed to Washington, DC area commuters, a portion of which are employed at the WNY. To adequately assess traffic conditions, turning movement counts were conducted at designated intersections in April 1995 between: 6:30 AM to 9:00 AM; 11:30 AM to 1:30 PM and 3:00 PM to 6:00 PM. Spot counts were performed in March 1996 and show no significant change in traffic volumes. The results of the survey are shown on Figure 1.7.

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Figure 1.7, Existing Peak Hour Traffic Volumes



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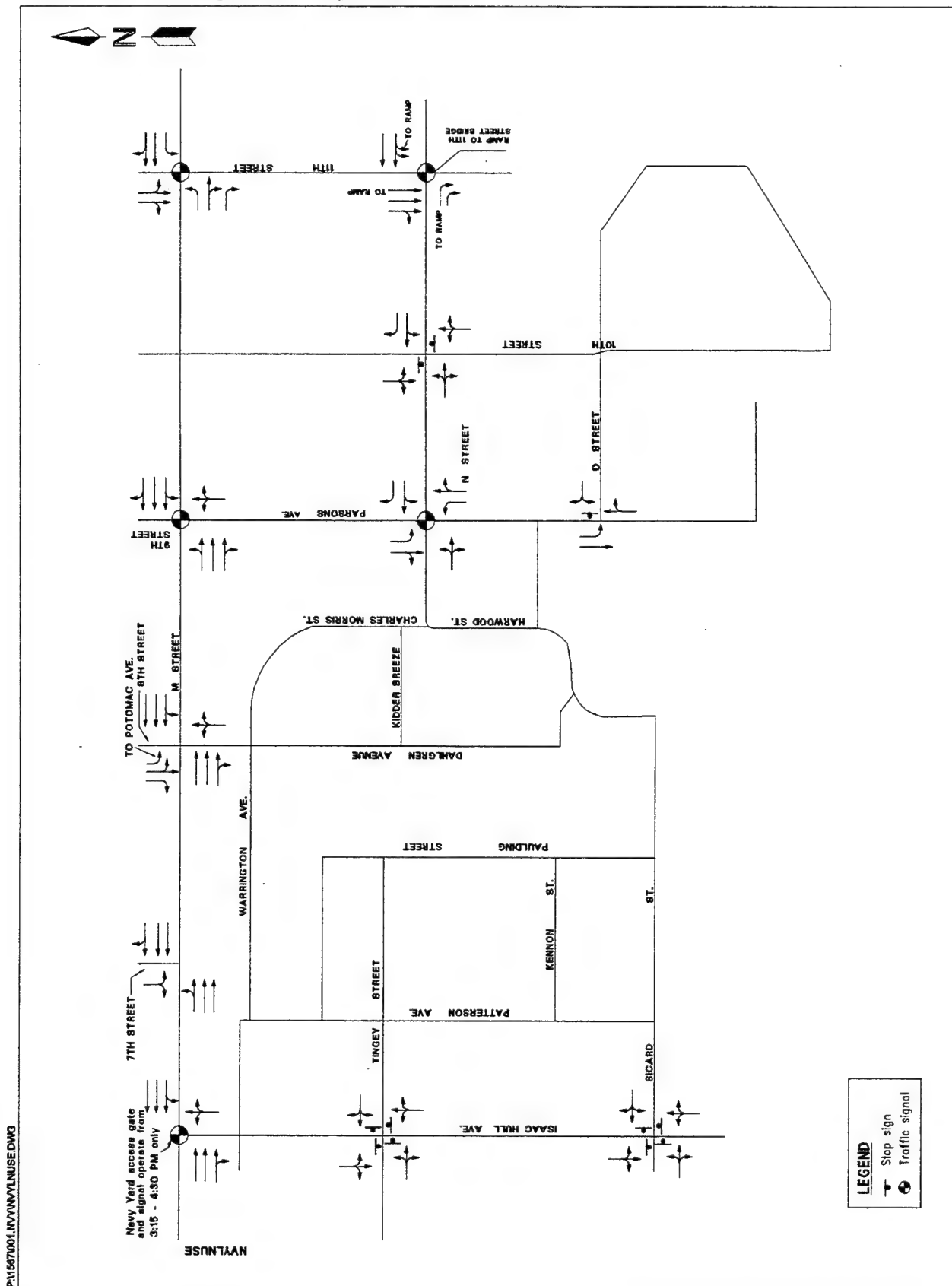
TABLE 1.2  
Intersection Descriptions

Intersections	Traffic Control	Major Intersections	WNY Major Access	WNY Minor Access	Minor Intersection
M St. S.E.@ Isaac Hull Ave.	Signalized*			X	
M St. S.E.@ 7th St.	Unsignalized				X
M St. S.E.@ 8th St.	Signalized	X		X	
M St. S.E.@ 9th St.	Signalized	X	X		
M St. S.E.@ 11th St.	Signalized	X			
N St. S.E.@ Parsons Ave.	Signalized				X
N St. S.E.@ 10th St.	Unsignalized				X
N St. S.E.@ 11th St.	Signalized	X	X		
O St. S.E.@ Parsons Ave.	Unsignalized				X
Isaac Hull Ave. @ Tingey St.	Unsignalized			X	
Isaac Hull Ave. @ Sicard St.	Unsignalized				X

\* Signalized during WNY PM Peak hour only (3:15 PM to 4:30 PM). During the remaining time, the signal flashes and the WNY access is closed.

Shown in Figure 1.7 are the AM/midday/PM peak hour turning movement counts at each of these intersections. The morning network peak hour is from 7:15 - 8:15 AM and the evening peak hour is from 4:15 - 5:15 PM. The peak hour lane configurations at the aforementioned intersections are illustrated in Figure 1.8.

Figure 1.8, Existing Lane Usage and Traffic Controls



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### 1.2.2 Intersection Capacity Analysis

Peak hour capacity analyses were conducted at surveyed intersections following the 1994 Highway Capacity Manual, Special Report 209 guidelines. The results are expressed in "Level of Service" or LOS. A brief description of the Levels of Services are presented in the following sections for unsignalized and signalized intersections:

- *Signalized Intersections*

Level of Service is based upon the traffic volume present at the intersection, the capacity of each lane at the intersection and the resultant delay associated with each directional movement. The average intersection delay is calculated from the weighted average of the delay for each movement. The Levels of Service for signalized intersections are defined by average delay as described below:

- Level of Service A describes operations with very low average delay per vehicle, i.e., less than 5.0 seconds. This occurs when signal timing between successive intersections is extremely favorable (i.e. very good progression), and most vehicles arrive during the green phase. Most vehicles do not stop. Short signal cycle lengths may also contribute to low delay.
- Level of Service B describes operations with average delay in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
- Level of Service C describes operations with average delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures when not all waiting vehicles clear the intersection during one green period may begin to appear at this level. The number of vehicles stopping is noticeable at this level although many still pass through the intersection without stopping. This is generally considered the lower end of the range of the acceptable Level of Service in rural areas.
- Level of Service D describes operations with average delay per vehicle in the range of 25.1 to 40.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and/or high traffic volumes as compared to the roadway capacity. Many vehicles are required to stop and the number of vehicles that do not have to stop declines. Individual signal cycle failures, where all waiting vehicles do not clear the intersection during a single green time, are noticeable. This is the design Level of Service for high volume suburban intersections.
- Level of Service E describes operations with average delay in the range of 40.1 to 60.0 seconds per vehicle. These higher delay values generally indicate poor progression,

long cycle lengths, and high traffic volumes. Individual cycle failures are frequent occurrences. (LOS E has been set as the limit of acceptable conditions in congested areas.)

- Level of Service F describes operations with average delay in excess of 60.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when traffic arrives at a rate that exceeds the capacity of the intersection. It may also occur at high volumes with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such delays.

◦ *Unsignalized Intersections*

At an unsignalized intersection, the major street through traffic and right turns are assumed to operate unimpeded and therefore receive no Level of Service rating. The Level of Service for the minor street and the major street left turn traffic is dependent on the volume and capacity of the available lanes, and, the number and frequency of acceptable gaps in the major street traffic to make a conflicting turn. The Level of Service grade is provided for each conflicting movement at an unsignalized intersection and is based on the total average delay experienced by each vehicle. The delay includes the time it takes a vehicle to move from the back of a queue through the intersection. The unsignalized intersection Level of Service analysis does not account for variations in driver behavior or the effects of nearby traffic signals. Therefore, the results from this analysis usually indicates worse Levels of Service than may be experienced in the field. The unsignalized intersection Level of Service descriptions are provided below:

- Level of Service A. Describes operations where there is very little to no conflicting traffic for a minor side street movement, i.e., an average total delay of less than 5.0 seconds per vehicle.
- Level of Service B. Describes operations with average total delay in the range of 5.1 to 10.0 seconds per vehicle.
- Level of Service C. Describes operations with average total delay in the range of 10.1 to 20.0 second per vehicle.
- Level of Service D. Describes operations with average total delay in the range of 20.1 to 30.0 seconds per vehicle.
- Level of Service E. Describes operations with average total delay in the range of 30.1 to 45.0 seconds per vehicle.

- **Level of Service F.** Describes operations with average total delay of 45 seconds per vehicle. LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to cross safely through or enter a major street traffic stream. This Level of Service is generally evident from extremely long total delays experienced by side street traffic and by queuing on the minor approaches. It is important to note that LOS F may not always result in long queues or delays but may result in adjustments to normal driver behavior.

Table 1.3 presents a summary of each Level of Service for signalized and unsignalized intersections.

TABLE 1.3  
Level of Service Criteria

Level of Service	Average Delay/vehicle	
	Signalized	Unsignalized
A	< 5.0 seconds	< 5.0 seconds
B	5.1 - 15.0 seconds	5.1 - 10.0 seconds
C	15.1 - 25 seconds	10.1 - 20.0 seconds
D	25.1 - 40.0 seconds	20.1 - 30.0 seconds
E	40.1 - 60.0 seconds	30.1 - 45.0 seconds
F	> 60.0 seconds	> 45 seconds

The intersection capacity analysis worksheets and calculations are presented in Appendix C. The capacity analysis results for existing conditions are shown in Table 1.4.

Considering that a Level of Service D or better is recognized as acceptable for urban peak hour traffic operations, all but two of the intersections surveyed operate satisfactorily. The exceptions are; peak AM traffic at 7th and M Street (southbound 7th Street traffic turning left - LOS E); and peak AM and PM traffic at the South Capitol/M Street intersection (combined commuter traffic volume at this major intersection exceeds capacity). Although the analysis indicates an LOS E for the M/7th Street intersection, left turn movements are actually facilitated by adjacent signalized intersections which interrupt traffic flow.

All of the internal intersections within the WNY operate at a Level of Service A or B with a substantial capacity reserve.

### 1.2.3 On-Site Parking Usage

A field survey of the on-site parking usage was undertaken for a typical weekday, between 10 AM and 11 AM, in order to determine the peak parking occupancy rate. Results for each parking zone are presented in Table 1.5.



TABLE 1.4  
Existing Peak Hour Capacity Analysis

Intersections	Traffic Control	LEVELS OF SERVICE (LOS)		
		AM Peak Hour	Mid-Day Peak Hour	PM Peak Hour
M St. S.E.@ Isaac Hull Ave.	2 phase signal	N/A	N/A	B(8.9 Sec.)
M St. S.E.@ 7th St.	TWSC	E (SB: 36.4 sec.)	N/A	D(SB:25.5 Sec.)
M St. S.E.@ 8th St.	2 phase signal	B (6.6 sec.)	N/A	B (6.5 sec.)
M St. S.E.@ 9th St./Parsons Ave.	2 phase signal	B (9.1 sec.)	N/A	B (10.9 sec.)
M St. S.E.@ 11th St.	3 phase signal	C (17.3 sec.)	N/A	C (18.5 sec.)
N St. S.E.@ 11th St.	2 phase signal	B (10.8 sec.)	N/A	C (16.6 sec.)
N St. S.E.@ 10th St.	TWSC	B (NB:9.8 sec.)	A (NB:4.5 sec.)	B (NB:5.4 sec.)
N St. S.E.@ Parsons Ave.	2 phase signal	B (7.1 sec.)	B (6.5 sec.)	B (9.2 sec.)
O St. S.E.@ Parsons Ave.	TWSC	A (WB:3.3 sec.)	A (WB:3.2 sec.)	A (WB:3.2 sec.)
Isaac Hull Ave. @ Sicard St.	AWSC	A (2.0 sec.)	A (142 sec.)	A (16 sec.)
Isaac Hull Ave. @ Tingey St.	AWSC	A (2.5 sec.)	N/A	A (1.9 sec.)
South Capitol St. @ M St.	3 phase signal	F (*)	N/A	F (*)

Note: TWSC: Two-Way Stop Control; AWSC: All-Way Stop Control  
NB: Northbound; SB: Southbound; EB: Eastbound; WB: Westbound  
For Two-Way Stop Control Intersections, the delay presented represents the approach direction with the greatest delay.  
\*: Volumes exceed capacity of the intersection.  
( ): Direction of approach and seconds of delay  
N/A: Not analyzed (Only internal WNY intersections were analyzed for the Mid-day peak hour.)

The parking occupancy accumulation rate is high (82% to 97%) in every parking zone except zone D (the residential/museum/related-use zone), where a 68% occupancy rate was observed. Of the total 3,586 available spaces, 439 (or 12%) were vacant at the time of the survey. The overall occupancy rate was estimated to be 88%.

TABLE 1.5  
Existing Parking Usage

ZONE	Available Spaces	Unoccupied Spaces	Occupied Spaces	% of Space Occupied
ON SITE:				
A (Garage)	1,013	90	923	91%
B	210	25	185	88%
C	968	170	798	82%
D	253	81	172	68%
E	476	14	462	97%
F	225	17	208	92%
G	441	42	399	90%
TOTAL	3,586	439	3,147	88%
SATELLITE LOTS:				
Overflow Lot 4 (Temporary)	500	440	60	12%
Overflow Lots 1,2,3	294	294	0	0%

#### 1.2.4 Safety

Accident data within the WNY and in the near vicinity of the site were collected for the years 1993, 1994 and 1995 from the Department of the Navy. This data has been summarized in Table 1.6. (Accident data for 1995 includes traffic data until May 23, 1995).

From the data collected, there were 19 accidents in 1993, 25 accidents in 1994, and 15 accidents in the period between January 1, 1995 and May 23, 1995. The types of accidents range from "acts of nature" (i.e. ice) to failing to yield to pedestrians. It was determined through discussions held with personnel from the Department of the Navy, that virtually all of the collisions were due to careless driver error as opposed to unsafe traffic conditions. The majority of the negligence can be attributed to running red traffic signals or backing up a vehicle without caution. Approximately 25% of the accidents occurred during the morning peak period (6:30 - 9:00 AM), and 15% occurred during the evening peak period (3:30 - 6:00 PM).

There was a higher number of accidents that occurred at the M Street S.E. and 9th Street S.E. WNY gate during 1994. This is attributed to the initial closure of the 6th Street and M Street S.E. gate causing a higher volume of vehicles to enter and exit from the 9th Street gate and a significant number of vehicles running a red signal on M Street S.E. The signal on M Street S.E. has been identified as difficult to see due to the sun and the location.

TABLE 1.6  
 Summary of Accident Data

Location	Number of Accidents		
	1,993	1,994	1,995
Sicard and Patterson	1		
9th and N Streets	2	3	
B-197 WNY	1		2
B-166 WNY	3	1	1
Patterson Avenue	1		
12th and M Street	1		
B-143 WNY	1		1
Isaac Hull Avenue	1		
11th and M Streets	1		
B-112 WNY	1		
Dahlgren to Kidder Breeze	1		
B-386 WNY	1	1	
9th and M Street (WNY)	2	8	2
11th Street Bridge	1		
11th and N Street	1	1	
10th and N Street		1	
B-200 WNY		3	
B-101 WNY		2	
B-176		1	1
B-142		2	
B-22		1	
B-183 WNY		1	
B-220 WNY			1
B-172			2
B-320 WNY			1
B-175			1
B-198			1
B-70			1
B-108			1
<b>TOTAL</b>	<b>19</b>	<b>25</b>	<b>15</b>

Note: Data represents accidents occurring until May 1995.

### 1.3 Summary of Existing Transportation Characteristics

#### 1.3.1 Trip Generation of Navy Traffic

There are approximately 5,400 employees at the WNY. As shown in Table 1.7, during the WNY traffic peak hours, these employees generate 1,492 vehicle trips (in and out) in the morning peak hour and 1,227 vehicle trips (in and out) in the evening peak hour. The resulting rates of AM and PM Navy peak hour vehicle trips per employee are 0.28 and 0.23 respectively. Also shown are the inbound and outbound directional splits during each AM and PM peak hour. During the street peak hours the vehicle per employee trip rate is slightly less than during the Navy peak hour.

TABLE 1.7  
Existing WNY Vehicle Trip Generation

	Vehicle Trips (In and Out)	Trip Rate*	Directional Distribution	
			In	Out
WNY AM Peak Hour	1,492	0.28	88%	12%
WNY PM Peak Hour	1,227	0.23	16%	84%
Street AM Peak Hour	1,158	0.21	82%	18%
Street PM Peak Hour	1,186	0.22	13%	87%

\* Trip Rate: number of vehicle trips/employee (Data collected on Wednesday 4/5/95)

When compared to the range of average vehicle trips per employee rate listed in the Institute of Transportation Engineers (ITE) Trip Generation Handbook for military base or governmental office complex, the actual WNY trip rates are at the lower end of the range. This may be a reflection of the available nearby Metro lines and of the significant car/van pool usage.

#### 1.3.2 Modal Distribution

Table 1.8 presents the current arrival modal distribution. This information was collected simultaneously during the traffic count surveys. The modal split calculations are based on the number of vehicles and respective occupants during the Navy AM peak period (6:30 AM to 8:00 AM). Also shown for comparison is the modal distribution observed for the 1990 Environmental Assessment Study, although the Navy Yard Metro Green Line station was not yet open in 1990.

TABLE 1.8  
 Arrival Mode Distribution during the Peak Period (6:30 AM - 8:00 AM)

Modal Type	Number of Vehicles	Number of Persons	Number of Passengers	Modal Split %	
				Current	1990 EA Study
Single Occupancy Vehicle (SOV)	1,532	1,532	0	68%	65%
2-Person Carpool	161	322	161	14%	20%
3-Person Carpool	21	63	42	3%	5%
4-Person Carpool	3	12	9		
Van Pool	14	84	70	4%	4%
Pedestrians & Public Transportation		238	238	11%	6%
TOTAL	1,731	2,251	520	100%	100%

Average Passenger Occupancy (APO) = 2,251 divided by 1731 = 1.30 persons/vehicle

Non-auto driver mode split (percentage of passengers in vehicles, this does not include pedestrians) = 23%

The number of single occupancy vehicles (SOV) has slightly increased from 65% to 68%. Such an increase is not necessarily significant and could be the result of seasonal variation. More significant is an 8% decrease of employees using car/van pools, from 29% to 21%. As expected, the public transit split has almost doubled, from 6% to 11% as a result of the opening of the Navy Yard Metro station. However, this shift appears to have occurred at the expense of previous car/van pool riders.

The resulting Average Passenger Occupancy (APO) is 1.30 persons per vehicle, while the percentage of employees in vehicles who do not drive (non-auto drivers) is 23%. In the actual context of vehicle trip reduction campaigns recommended in urban areas, these rates are indicative of a still relatively high SOV usage. This could be directly related to several facts: (a) the regional site access is relatively adequate due to the adjacent expressways and freeways, (b) there is minimal traffic congestion in the vicinity of the site, (c) the Navy Yard Metro station and the Eastern Market Metro station are approximately a ten to twenty minute walk from the site.

### 1.3.3 Parking/Employee Ratio

The employee per parking space ratio and number of employee parking spaces for the current situation, the previous 1990 Environmental Assessment Study, and the National Capital Planning Commission Comprehensive Plan policy for the area are presented in Table 1.9. The number of parking spaces represent the parking supply reserved for employees only and not visitors, motor pool, or government vehicles. The current employee to parking space ratio is 1.89. This ratio is relatively low when compared to the NCPC policy of 3 employees to 1 parking space. However, it represents the results of organizational down sizing in the 1990-1995 period, or a trough prior

to a renewed build-up at the Washington Navy Yard due to the consolidation of Defense Department agencies.

TABLE 1.9  
On-Site Employee to Parking Space Ratios

	Current	1990 EA	NCPC Policy
Number of Employees	5400	6,900	
Number of Employee Parking Spaces	2852*	2,724	
Employee to Parking Space Ratio	1.89/1	2.53/1	3/1

\* Does not include visitor, quarters or government parking spaces.

As shown in Table 1.9, the population in 1990 was 1500 employees more than the current population. The higher employee to parking ratio in 1990 reflects the constraints on available parking spaces within the WNY for employees in 1990. This had promoted more carpool use and transit patronage in 1990 because there was more competition for available parking spaces. Since 1990, the WNY has increased the employee parking supply and decreased the WNY employee population. This has affected the modal distribution since 1990, because there is currently a greater availability for employee parking spaces than there was in 1990.

It should also be noted that the frequent ceremonies in the Navy Yard such as retirements and changes-of-command, especially in the warmer half of the year, reallocate large areas of employee parking to VIP visitor parking.

#### 1.3.4 Summary

From a transportation access and traffic operations viewpoint, there is currently a reserve of capacity, particularly on site, to accommodate additional WNY traffic with minimal impact. All but two intersections surveyed operate at acceptable Levels of Service. The exceptions are; peak AM traffic at 7th and M Street (southbound 7th Street traffic turning left - LOS E); and peak AM and PM traffic at the South Capitol/M Street intersection (combined commuter traffic volume at this major intersection exceeds capacity). Although the analysis indicates LOS E for the M Street/7th Street intersection, left turn movements are actually facilitated by adjacent signalized intersections which interrupt traffic flow.

Based on the current modal distribution, the on-site parking supply is adequate with some reserve for additional demand. In addition, there are approximately 294 parking spaces (excluding the temporary Lot 4) that can be utilized by the WNY and serve as overflow lots.

## 2.0 PROJECTED TRANSPORTATION FOR THE PROPOSED REALIGNMENT OF NAVY ACTIVITIES

The result of the BRAC actions will add 5,400 individuals to the workforce at the WNY. This addition of personnel is expected to increase the total workforce at the WNY to 10,800. New office space and parking will be provided for the relocated personnel by converting several buildings on the western side of the WNY. A parking garage will replace surface lots and provide additional parking for new personnel. Some existing surface parking will be eliminated, the M Street/Isaac Hull Avenue access will become a main access point to the WNY and a one-way circulation pattern is proposed on the western section of the site. The proposed internal circulation pattern is a one-way loop southbound from the Isaac Hull Avenue/M Street entrance that continues south along Isaac Hull Avenue to Sicard Street, east along Sicard Street to Patterson Avenue, north on Patterson Avenue to Warrington Avenue before extending back to the Isaac Hull Avenue/M Street entrance. Figure 2.1 illustrates the planned changes to parking and traffic circulation proposed for the BRAC actions.

To accommodate traffic that will be accessing the parking spaces on the west end of the site (32% of the parking supply), it has been proposed that the M Street and Isaac Hull WNY entrance be modified. Currently this entrance is only opened from 3:15 to 4:30 PM. With the development of the proposed modifications of the site, this entrance will serve as one of the main entrances and will be opened during the primary work hours.

Three scenarios were analyzed for future traffic conditions:

1. Background traffic volumes that are expected to occur with or without the BRAC moves.
2. Future traffic volumes that include background traffic and the BRAC moves assuming no parking constraints or mitigation.
3. Future traffic volumes that include background traffic and the BRAC moves assuming that traffic is controlled due to the parking constraints.

Section 2.1 presents the traffic projections of the background development projects in the vicinity of the WNY. These projections are based on the anticipated trip generation of the Southeast Federal Center (SEFC) development and the Washington Metropolitan Area Transit Authority (WMATA) Metrobus Garage.

Section 2.2 presents projections of future volumes at the WNY with the relocation of 5,400 employees from all the BRAC actions. The projected total WNY population of 10,800 employees generates two categories of vehicular trips: (1) trips resulting from the relocation of 4,100 employees associated with BRAC 95 and (2) trips resulting from the existing population of 5,400 employees and from the relocation of 1,300 employees associated with BRAC 93 WNY relocation actions. The trip projections associated with BRAC 95 are based on the Mode of Transportation (MOT) surveys conducted to determine the mode of transportation that employees relocating to the WNY would utilize. The trip projections associated with the existing population and the BRAC 93 WNY relocation actions are based on the trip generation rates identified from existing counts in the *Transportation Management Plan Washington Navy Yard*, dated



0 200 400  
SCALE: 1 INCH = 400 FEET

**LEGEND**

- Building to be built, renovated, or converted
- Proposed multi-level parking garage (1500 spaces)
- Proposed BRAC 1993 Action parking garage (1065 spaces)



October 31, 1995. The summation of the vehicular trips from the two categories represents the total future trip generation expected at the WNY without the implementation of any parking constraints or mitigation measures.

Section 2.3 presents traffic projections of future volumes at the WNY with the relocation of 5,400 employees from all the BRAC actions based on parking constraints set by the WNY. In consideration of NCPC's 1:3 parking ratio and to reduce the impact to local traffic associated with the BRAC relocation of 5,400 personnel to the WNY, the Navy will only allocate 1,800 employee vehicle parking spaces to accommodate the relocated personnel at the Installation. Future traffic levels are based on this reduced parking capacity and the proposed allocation of employee parking spaces. In this section, a relationship between the parking accumulation (which is the number of vehicles that park in an hour) and the trip generation of that same hour is developed. The resulting peak hour trip generation was assigned to the roadway network and analyzed using intersection capacity analysis to determine traffic impacts.

## **2.1 Projected Future Background Development Traffic**

This section presents projections of future background traffic volumes that will result regardless of the BRAC actions. These background traffic volumes include traffic that will be generated by proposed developments in the vicinity of the WNY that include the Southeast Federal Center and the Washington Metropolitan Area Transit Authority (WMATA) Metrobus Garage.

### ***2.1.1 Projected Future Background Traffic Volumes***

Projected 2001 background traffic without the WNY expansion was projected to determine impacts to the streets in the vicinity of the WNY not related to the WNY. No roadway improvements are scheduled along M Street S.E. or 11th Street S.E. before 2001, or in the near future.

Comparison of peak hour counts along M Street S.E. and 11th Street S.E. between this study and the previous 1990 Environmental Assessment Study of the WNY indicates that the traffic has stabilized and no growth was observed. In the Metrobus Garage Southeastern Division Environmental Assessment, the trips generated by the proposed Metrobus Garage of the Washington Metropolitan Area Transit Authority, which is expected to open in 1997 and be located on the adjacent Southeast Federal Center site, would only contribute 2 AM peak hour trips and 9 PM peak hour trips to the background traffic volumes along M Street during the roadway network peak hours.

Additional traffic is expected from the redevelopment of the Southeast Federal Center (SEFC) by the General Services Administration (GSA). The development within the SEFC will attract a combined addition of 5,100 employees. The GSA Headquarters Building and the United States Army Corps of Engineers Building are the only two components of the proposed SEFC development that are planned by GSA at this time. Because the first phase of development is not fully committed, the trip generation calculations for these buildings reflect partial completion and occupancy. Based on information provided in the The Final EIS-Eastern Portion of the Southeast

Federal Center & General Services Administration Headquarters Building on the Eastern Portion of the Southeast Federal Center, prepared by GSA in cooperation with NCPC in September 1992, the SEFC employees associated with these two buildings will generate 16 AM peak hour eastbound trips and 129 AM peak hour westbound trips along M Street in the vicinity of the site in the Year 2001. During the PM peak hour of Year 2001, the SEFC redevelopment would generate 19 westbound trips and 99 eastbound trips along M Street in the vicinity of the site. The projected 2001 peak hour background traffic due to the redevelopment of the SEFC is shown on Figure 2.2.

## 2.2 Projected Traffic Conditions without Limited Parking Constraints

This section presents projections of future traffic volumes resulting from the projected background developments and BRAC actions assuming no parking constraints are established and no mitigation measures are implemented. These projections are based on results from a Mode of Transportation (MOT) survey administered in the summer of 1996 for NAVSEA employees planning to relocate to the WNY as part of BRAC 95.

### 2.2.1 Analysis of Future Conditions without Limited Parking

A survey was completed in the summer of 1996 of NAVSEA employees to estimate the projected mode choice of employees that are relocating to the WNY due to BRAC 95. Assuming that there are no traffic capacity and no parking capacity constraints at the WNY, an analysis was completed based on the survey results. Approximately 4,100 employees will be relocated due to BRAC 95. Table 2.1 presents the survey results of employees planning to relocate to the WNY.

Table 2.1  
Projected Mode Choice Results

Mode of Travel	Percentages
Drive Alone (SOVs)	50.3%
Carpool	22.0%
Vanpool	8.6%
Dropped Off	1.0%
Metrobus	2.9%
Metrorail	9.1%
Commuter Rail	2.7%
Walk/Bike	3.4%
<b>Total</b>	<b>100.0%</b>

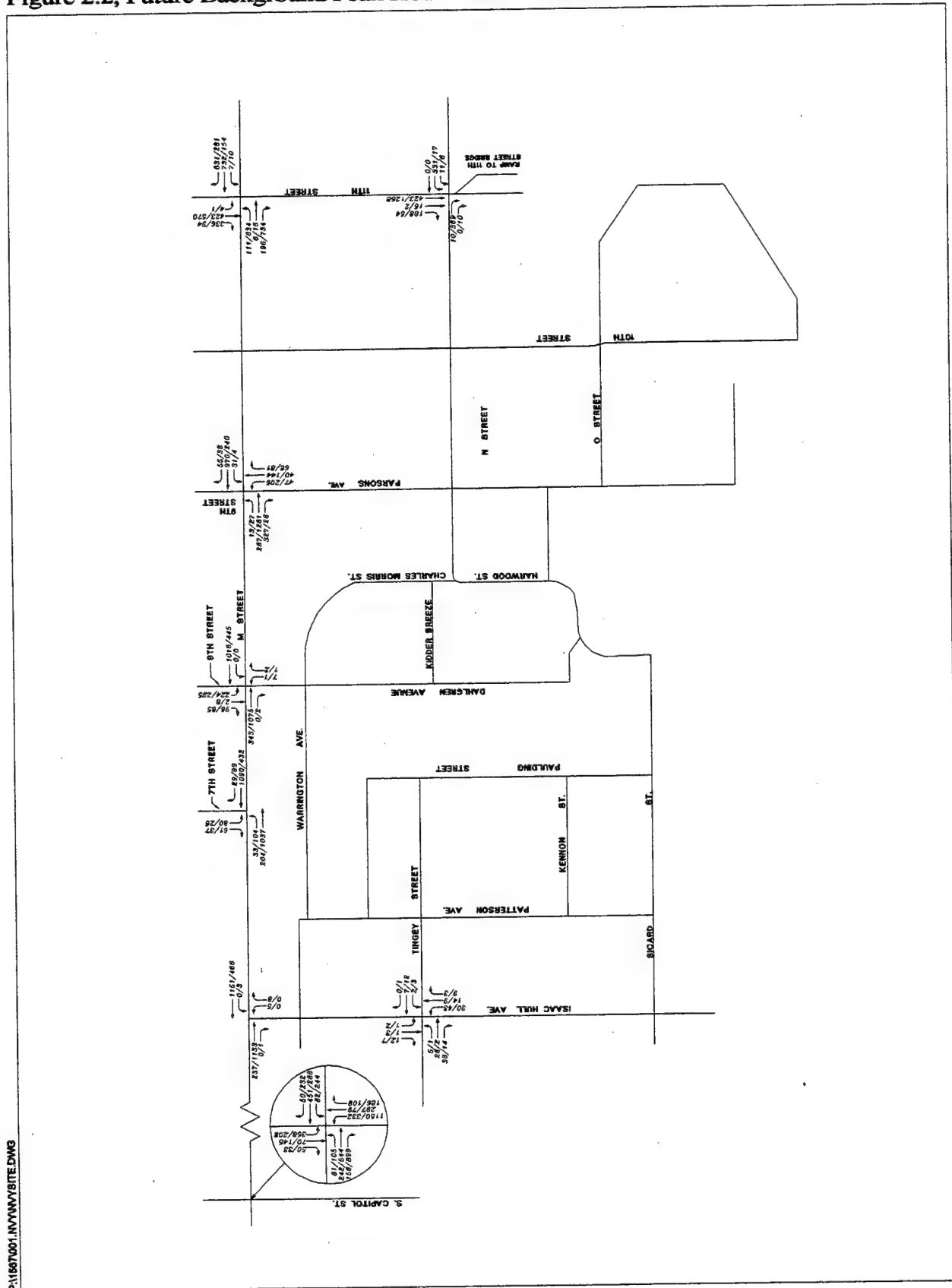
Note: These percentages were calculated based on the NAVSEA employee survey.

# TRAFFIC MANAGEMENT PLAN UPDATE

Realignment of NAVSEA Headquarters EIS

Washington Navy Yard, Washington, DC

Figure 2.2, Future Background Peak Hour Traffic Volumes



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# TRAFFIC MANAGEMENT PLAN UPDATE

Realignment of NAVSEA Headquarters EIS

Washington Navy Yard, Washington, DC

A vehicle trip generation was completed based on the mode choice results, assuming 4,100 employees for BRAC 95. In addition, a 15% absenteeism rate was estimated for employees that are sick, on personal leave, or not on-site due to meetings off-site. The total number of vehicle trips that will be generated by the additional employees of BRAC 95 during the morning and afternoon peak periods are presented in Table 2.2. The total presented in Table 2.2 represents the total number of vehicular trips that the 4,100 BRAC 95 employees would attract to the WNY for the entire peak AM and PM periods.

Table 2.2  
Peak Period Vehicle Trip Generation

Mode Choice	Peak Period Vehicle Trips
Drive Alone (SOVs)	1,753
Dropped Off	35
Carpool/Vanpool Vehicles @ 2.9 persons per vehicle	368
<b>Total</b>	<b>2,156</b>

The number of vehicle trips that arrive during the M Street peak hour was calculated by determining the percentage of survey respondents who arrive during the AM M Street peak hour of 7:15 AM - 8:15 AM. From the employee survey data, it was determined that 33% of the respondents arrive during the AM M Street peak hour and 26 % of the respondents leave during the M Street peak hour of 4:15 PM - 5:15 PM. By applying these percentages to the vehicle trip generation in Table 2.2, the AM inbound and the PM outbound trips were determined for the additional 3,485 employees (reflects 15% absenteeism) associated with BRAC 95 and are presented in Table 2.3.

Table 2.3  
Trip Generation during the M Street Peak Hours

	Peak Hour Percentage of Peak Period Volume	Number of Trips
AM M Street Peak Hour (7:15-8:15 AM) Inbound Trips	33%	720
PM M Street Peak Hour (4:15-5:15 PM) Outbound Trips	26%	561

Table 2.4 presents the total number of vehicular trips that will be generated by the 6,700 employees associated with the existing WNY employees and the employees relocated by BRAC 93/NAVAUDIT relocation actions. These trip generation rates have been identified in the

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*Transportation Management Plan Washington Navy Yard*, dated October 31, 1995, and are presented in Table 2.4.

Table 2.4  
Trip Generation  
for Existing WNY Conditions and BRAC 93

	Trip Rate per employee	Inbound	Outbound	Total
AM Street Peak Hour	0.21	1,154	253	1,407
PM Street Peak Hour	0.22	192	1,282	1,474

The summation of the total trips from Tables 2.3 and 2.4 represent the total AM and PM peak hour trip generation that would result at the WNY with a total employee population of 10,800 without any parking constraints.

## 2.2.2 Contractor Trip Generation

According to Economic Impacts of the Washington Navy Yard Washington, D.C. prepared by Hammer, Siler, George Associates in March 1996, approximately 7,000 civilian personnel are employed at Crystal City by defense contractors that do business with NAVSEA. These contractors will continue to work with NAVSEA following the relocation to the WNY. The report projects that approximately 4,900 contractor personnel would remain at their current offices in Crystal City, while the remaining 2,100 are expected to relocate to southeast Washington, D.C. in the vicinity of the WNY. The anticipated effects from contractor travel to the WNY from Crystal City would be greatly reduced by the timing of contractor visits. Contractor trips generated by relocated employees is expected to add 21 trips along M Street fronting the WNY during the AM peak hour and 17 trips during the PM peak hour. These contractor trips are presented in Table 2.5.

Currently, 6,957 contractors provide various services for the NAVSEA facilities in Crystal City. Of these workers, 4,857 contractors will remain in Crystal City and will commute to and from the WNY site between 9 AM and 3 PM. Therefore, the trips resulting from these contractors will not occur during the roadway network peak hours and were subsequently not included in the analysis. The remaining 2,100 contractors will relocate near the WNY site as a direct result of the proposed BRAC actions. these 2,100 contractors will require approximately 525,000 square feet of office space. For this analysis, it was assumed that two office buildings housing these contractors would be located at the southeastern quadrant of the South Capitol Street and M Street intersection. The contractor trips generated by these two office buildings would add only 21 trips along M Street fronting the WNY during the AM peak hour and 17 trips during the PM peak hour. These contractor trips are presented in Table 2.5.

Table 2.5  
 Trip Generation for Contractors

	Inbound	Outbound	Total
AM Street Peak Hour	18	3	21
PM Street Peak Hour	2	15	17

### 2.2.3 Total Trip Generation

The unconstrained peak hour trip generation at full build-out of the WNY for BRAC 95 is presented in Table 2.6. This trip generation is the summation of existing trips to the WNY; trips associated with BRAC 93/NAVAUDIT relocation and BRAC 95; and contract employee trips.

Table 2.6  
 WNY Total Future Trip Generation  
 Based on Employee Survey Data Results

	Inbound	Outbound	Total
<b>AM Street Peak Hour</b>			
Existing WNY Trips	950	208	1,158
BRAC 93 Employee Trips <sup>1</sup>	204	45	249
BRAC 95 Employee Trips	720	180*	900
Contractor Trips	18	3	21
<b>TOTAL</b>	<b>1,892</b>	<b>436</b>	<b>2,328</b>
<b>PM Street Peak Hour</b>			
Existing WNY Trips	154	1,032	1,186
BRAC 93 Employee Trips <sup>1</sup>	38	250	288
BRAC 95 Employee Trips	61*	554	615
Contractor Trips	2	15	17
<b>TOTAL</b>	<b>255</b>	<b>1,851</b>	<b>2,106</b>

Notes:

<sup>1</sup> - These trips represent the 1,300 employees remaining at the WNY due to BRAC 93/NAVAUDIT relocation actions

\* - The AM outbound and the PM inbound trips have been calculated by determining the percent differences of the AM inbound and PM outbound trips between the *Washington Navy Yard Draft Traffic Management Plan Update* and Table 2.6 above.

### 2.3 Future Traffic Conditions with Limited On-Base Parking

This section presents projections of future traffic volumes resulting from the projected background developments and BRAC actions assuming that parking constraints are established and mitigation measures are implemented. Parking implications associated with these total future traffic volumes are assessed in this section. These volumes were subsequently analyzed to determine the traffic impacts on the local roadway network surrounding the WNY.

#### 2.3.1 *Parking Assessment*

In order to provide parking for relocating personnel, additional parking structures will be constructed at the WNY. Proposed projects also include the elimination of a portion of the existing surface parking lots. A multi-level parking garage was proposed in BRAC 93 to create a net increase of 777 parking spaces. The BRAC 95 action proposes a net increase of 910 parking spaces in areas E, F, and G. As a result, the net increase of 1,687 parking spaces will be added to the existing WNY parking supply of 3,586 parking spaces, bringing the total of available parking spaces to 5,273. This figure includes employee, visitor, residential, and government vehicle spaces.

In an effort to meet with NCPC's recommended parking supply of 1 space for every 3 employees, the future parking supply would be 3,600 spaces for 10,800 employees. Currently, 76 spaces are allocated for residential use and 160 parking spaces are allocated for government spaces which are not included in the calculation of employee parking. Statistics show that 4% currently use van pools and the MOT survey indicates 9% anticipate using van pools. The resulting average of these percentages translates to a parking need for 117 van pool vehicles. Accounting for all the aforementioned parking needs, the remaining 1320 spaces can be utilized for visitor parking.

A large number of attractions draw visitors to the WNY: The Navy Museum; Marine Corps Museum; the Navy Art Gallery; and numerous exhibits and displays throughout the Installation, including the U.S.S. Barry. The WNY typically hosts Naval ceremonies and summer performances by the Naval Band. In addition, various training classes are held on base and contractors meet with Navy representatives on a daily basis (NAVSEA expects approximately 2,000 daily visitors). Due to the existing and anticipated demand, a large number of parking spaces have been identified for use by visitors. Parking at the WNY is administered by Naval District Washington (NDW) and may vary slightly from the proposed parking designation presented in Table 2.7.



Table 2.7  
 Proposed Parking Space Breakdown By Lot

ZONE	Employee Spaces	Visitor Spaces	Special Use Spaces	Total Parking Spaces
ON SITE:				
A (Garage)	744	255	14	1,013
B	111	62	37	210
C	1,272	440	33	1,745
D	133	45	75	253
E	270	96	13	379
F	1,187	422	64	1,673
G	0	0	0	0
<b>TOTAL</b>	<b>3,717</b>	<b>1,320</b>	<b>236</b>	<b>5,273</b>

### 2.3.2 Trip Generation

The limited parking on-site will be the control that determines the amount of vehicles entering and leaving the site. For this analysis, a correlation between the peak hour trip generation and the number of cars parked during that same hour (parking accumulation) was established. During the AM peak hour, approximately 20% of the available parking spaces are occupied. During that same hour, the trips entering the WNY (inbound trips) are 130% of the parking accumulation (number of vehicles that park in that same hour). These percentages were determined based on existing count information. Similarly, the number of outbound trips during the AM peak hour is 30% of the parking accumulation. The methodology for applying these percentages is as follows:

AM peak hour parking accumulation = 20% of parking supply =  $(.20)(5,273 \text{ spaces}) = 1,055 \text{ spaces}$

AM peak hour inbound trips = 130% of AM peak hour parking accumulation =  $(1.30)(1,055 \text{ spaces})$   
 = 1,372 AM peak hour inbound vehicles

AM peak hour outbound trips = 30% of AM peak hour parking accumulation =  $(.30)(1,055 \text{ spaces})$   
 = 317 AM peak hour outbound vehicles

Using these existing percentages, the projected trip generation will be 1,371 vehicles inbound and 317 vehicles outbound during the roadway network AM peak hour. This will be an increase of approximately 584 trips from existing conditions for the AM peak hour. Similarly, during the PM peak hour, the existing inbound number of trips is 16% higher than the existing parking accumulation and the outbound number of trips is 16% of the existing parking accumulation. The resulting trip generation is 177 vehicles inbound and 1,284 vehicles outbound, thus resulting in an increase of 275 trips from existing PM peak hour conditions. The summation of the contractor trips, presented in Section 2.2.3, and the AM and PM peak hour trip generation resulting from the constrained parking represents the constrained total future trip generation for future conditions.



A summary of the total trips generated for future conditions with constrained parking is presented in Table 2.8.

Table 2.8  
WNY Total Future Trip Generation  
Based on Constrained Parking

	Inbound	Outbound	Total
AM Street Peak Hour	1,372	317	1,689
Contractor Trips	18	3	21
Total AM Street Peak Hour Trip Generation	1,390	320	1,710
PM Street Peak Hour	177	1,284	1,461
Contractor Trips	2	15	17
Total PM Street Peak Hour Trip Generation	179	1,299	1,478

### 2.3.3 Comparison between Unconstrained and Constrained Parking Situations

As presented in Section 2.2.4 (Table 2.6), the unconstrained parking situation will generate 1892 inbound and 436 outbound trips during the AM peak hour. During that same hour, the constrained parking situation will generate 1,372 inbound and 317 outbound trips, as presented in section 2.3.2 (Table 2.8). The total difference in trips from the unconstrained parking situation to the constrained parking situation is 618 trips during the AM peak hour, representing in an approximate 27% decrease in trips from the unconstrained parking situation. Similarly, the total difference in trips for the PM peak hour from the unconstrained parking situation (2,106 trips) to the constrained parking situation (1,478 trips) is 628 trips, resulting in an approximate 30% decrease in trips from the unconstrained parking situation. Table 2.9 presents a comparison of the total future trip generation with and without the parking constraints for the AM and PM peak hours.

Table 2.9  
 Comparison of WNY Total Future Trip Generation  
 Between Unconstrained and Constrained Parking Situations

	Inbound	Outbound	Total
<b>AM Street Peak Hour</b>			
Unconstrained Parking Situation (Section 2.2)	1,892	436	2,328
Constrained Parking Situation (Section 2.3)	1,390	320	1,710
Difference	502	116	618
<b>PM Street Peak Hour</b>			
Unconstrained Parking Situation (Section 2.2)	255	1,851	2,106
Constrained Parking Situation (Section 2.3)	179	1,299	1,478
Difference	76	552	628

The constrained parking situation will lead to a parking demand at the WNY to be reduced to a level where the proposed parking supply will be able to accommodate it. The WNY will implement several mitigation measures to facilitate the limited parking supply in reducing the parking demand to the level of the proposed parking supply. Because the parking supply is proposed as trip generation constraints, the trips generated for the constrained parking situation were used for determining the impacts of the relocation of the 5,400 employees to the WNY.

#### **2.3.4 Trip Distribution**

The projected traffic distribution was calculated based on the parking densities surrounding each entrance, the traffic distribution of current employees, and the projected distribution of BRAC 95 employees based on employee residence zip codes. The site generated trips for the constrained parking situation are presented in Figure 2.3.

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### 2.3.5 Analysis of Future Conditions with Mitigation for the Year 2001 Expansion Scenario

The projected total future traffic volumes for the Year 2001, which include the background traffic, the site-generated WNY traffic, and projected contract employee traffic, are shown in Figure 2.4. In order to evaluate the impact of the total future traffic on the WNY, a capacity analysis was undertaken using the projected total future traffic volumes.

The Levels of Service resulting from the intersection capacity analysis are shown in Table 2.10. At signalized intersections, the same cycle length was maintained, but signal timings were optimized according to the new demand distribution.

TABLE 2.10  
 Projected 2001 Peak Hour Intersection Levels of Service  
 (With Mitigation)

Intersections	Traffic Control	LEVELS OF SERVICE (LOS)	
		AM Peak Hour	PM Peak Hour
M St. @ Isaac Hull Ave.	2 phase signal	A (1.5 sec.)	B (11.0 sec.)
M St. @ 7th St.	TWSC	F (SB: 49.3 sec.)	F (SB: 521.2 sec.)
M St. @ 8th St.	2 phase signal	B (8.2 sec.)	B (6.8 sec.)
M St. @ 9th St./Parsons Ave.	2 phase signal	B (8.9 sec.)	B (10.8 sec.)
M St. @ 11th St.	3 phase signal	D (30.7 sec.)	D (28.1 sec.)
N St. @ 11th St.	2 phase signal	B (10.8 sec.)	C (20.6 sec.)
Isaac Hull Ave. @ Tingey St.	AWSC	A (1.7 sec.)	A (1.5 sec.)
South Capitol St. @ M St.	3 phase signal	F (*)	F (*)

Note: TWSC: Two-Way Stop Control; AWSC: All-Way Stop Control

For Two-Way Stop Control Intersections, the delay presented represents the approach direction with the greatest delay.

\*: Volumes exceed capacity of the intersection.

( ): Direction of approach and seconds of delay

SB: Southbound Approach

NB: Northbound Approach

WB: Westbound Approach

EB: Eastbound Approach

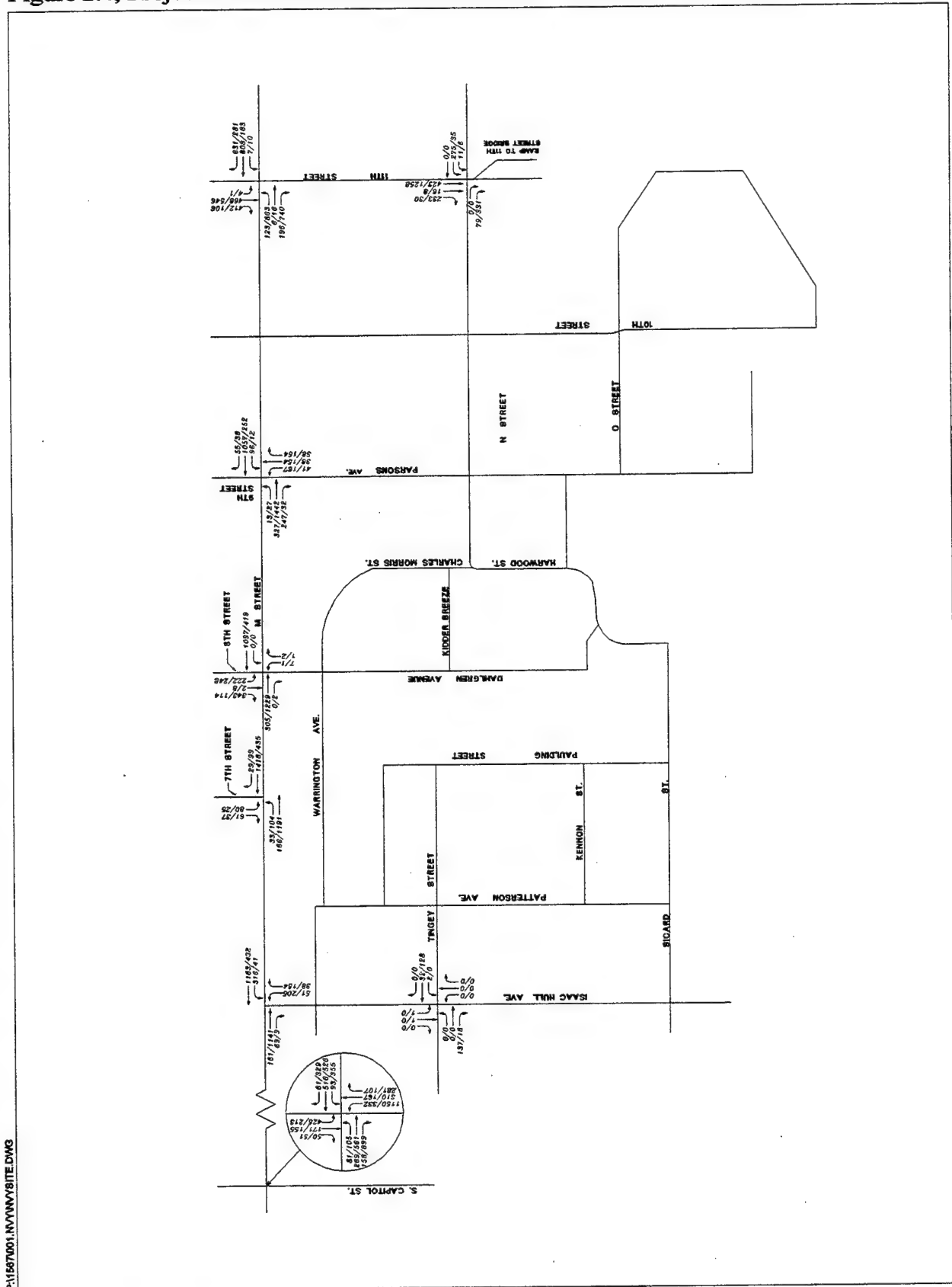
Most of the intersections are expected to operate at Level of Service D or better with the exception of the non-signalized T-intersection of M Street S.E. and 7th Street S.E. and the signalized intersection of South Capitol St., S.E. and M Street, S.E. The southbound 7th Street, S.E. left-turn traffic (still only 80 vehicles) is expected to experience delays since the projected traffic along M Street S.E. has increased, therefore making it more difficult to cross. As discussed earlier, it is not desirable to signalize this intersection since signalization would induce more traffic along 7th Street S.E. Additionally, there is a very convenient alternate route via 8th

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Figure 2.4, Projected 2001 Total Peak Hour Traffic Volumes with Mitigation



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Street S.E. to M Street S.E. The South Capitol Street and M Street intersection currently operates at an unacceptable Level of Service due to the amount of commuter traffic traversing through the intersection and will continue to operate at an unacceptable Level of Service for future conditions.

As shown in Table 2.10, the impact of the additional WNY traffic will result in an additional delay per vehicle of less than one second at most of the intersections in the AM or the PM peak hour except at the two intersections mentioned previously and the signalized intersections of N Street S.E. and of M Street S.E. with 11th Street S.E. During the PM peak hour, the delays per vehicle are expected to increase by approximately 9 seconds at the M Street S.E. and 11th Street S.E. intersection and by 4 seconds at the N Street S.E. and 11th Street S.E. intersection. The delay at the M Street S.E. and the 11th Street S.E. intersection results from the additional traffic turning left and right from M Street S.E. to 11th Street S.E. to access the I-295 ramps. This intersection will operate within an acceptable Level of Service D. The increased delay at the N Street S.E. and 11th Street S.E. intersection is mainly the result of the increase in WNY traffic expected to exit from the 11th Street WNY gate and to turn right onto the southbound I-295 on-ramp. This intersection will continue to operate at an acceptable LOS C. Table 2.11 presents a comparison of the Levels of Service for existing conditions and for total future conditions with mitigation.

**TABLE 2.11**  
Comparison of Existing Conditions and Future Conditions  
Projected 2001 Peak Hour Intersection Levels of Service  
(With Mitigation)

Intersections	Existing Conditions Levels of Service		Future Conditions Levels of Service with Mitigation	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
	LOS (delay)	LOS (delay)	LOS (delay)	LOS (delay)
M St. @ Isaac Hull Ave.	N/A	B(8.9 Sec.)	A (1.5 sec.)	B (11.0 sec.)
M St. @ 7th St.	E (SB: 36.4 sec.)	D(SB:25.5 Sec.)	F (SB: 49.3 sec.)	F (SB: 521.2 sec.)
M St. @ 8th St.	B (6.6 sec.)	B (6.5 sec.)	B (8.2 sec.)	B (6.8 sec.)
M St. @ 9th St./Parsons Ave.	B (9.1 sec.)	B (10.9 sec.)	B (8.9 sec.)	B (10.8 sec.)
M St. @ 11th St.	C (17.3 sec.)	C (18.5 sec.)	D (30.7 sec.)	D (28.1 sec.)
N St. @ 11th St.	B (10.8 sec.)	C (16.6 sec.)	B (10.8 sec.)	C (20.6 sec.)
Isaac Hull Ave. @ Tingey St.	A (2.5 sec.)	A (1.9 sec)	A (1.7 sec.)	A (1.5 sec.)
South Capitol St. @ M St.	F (*)	F (*)	F (*)	F (*)

In summary, the expected traffic operations along the streets adjacent to and bordering the WNY are expected to continue to be acceptable. These intersections will experience increased, but

acceptable delays. It should be noted that none of the local streets in the neighborhood are impacted as all of the additional WNY traffic is expected to remain on the main arteries: M Street S.E., 11th Street S.E., and the one-way pair of 8th Street S.E. and 9th Street S.E. The intersection of M Street and South Capitol Street currently operates at an unacceptable Level of Service and will continue to do so regardless of BRAC actions.

## **2.4 Internal Circulation Analysis**

As part of the proposed realignment, the WNY plans to make significant changes to the western portion of the site. These changes resulting from BRAC actions include the renovation of Buildings 104, 176, and 197; the demolition of buildings 143 and 28 and the construction of a multi-level parking garage in their place; the demolition of Buildings 201, 198, and 142 and the construction of a four-story office building in their place; and the construction of a four-story office building on the existing parking lot adjacent to the east side of Building 197.

This section analyzes the internal circulation on the western portion of the WNY. The analysis focuses on the access issues related to the proposed multi-level parking garage, the feasibility of a reversible lanes scheme, and the most efficient internal circulation pattern to provide access to all the parking facilities and office buildings.

### **2.4.1 Background of Circulation Alternative Analysis**

The proposed alternatives include the JJR Architects/SH&G Architects (JJR/SHG) scheme and two alternatives which assume reversible lanes on Isaac Hull Avenue that would operate in a similar fashion to the existing entrance at the intersection of 9th and M Street. During the morning peak hours, Isaac Hull Avenue would operate one-way into the WNY and during the PM peak hours, Isaac Hull Avenue would operate one-way out of the WNY. The alternatives presented in this analysis include the following:

1. Alternative 1 presents the JJR/SHG plan that entails a full one-way circulation pattern on Isaac Hull, Sicard Street, Patterson Avenue and the western end of Warrington Avenue.
2. Alternative 2 presents a reversible lanes scheme on Isaac Hull between Tingey Street and M Street.
3. Alternative 3 presents a reversible lanes scheme on Isaac Hull between the proposed garage entrances and M Street.

The criteria considered in the evaluation of the three alternatives include the following:

1. The adequacy of the garage access
2. The adequacy of access to Building 104 parking
3. The adequacy of access to parking for Buildings 105 and 112,
4. The east-west circulation
5. The overall traffic operations
6. The adequacy of WNY access
7. The effects on the residential quarters N and O located on Patterson Avenue

8. The implications for the cross-section of the M Street and Isaac Hull Avenue entrance

**2.4.2 Summary of Circulation Analysis Results**

The detailed analysis of the circulation alternatives focused on the implications of all three alternatives studied. Based on the effects of each alternative on all the criteria, Alternative 1, the proposed one-way circulation pattern with the roadway north of Building 104 operating one-way westbound, would operate the most efficiently.

The general findings of the configuration of the M Street/Isaac Hull Avenue entrance are as follows:

- If the M Street/Isaac Hull Avenue entrance is two-way, the minimum cross section of Isaac Hull Avenue/Patterson Avenue is three lanes. One lane would be used for inbound traffic and two lanes would be used for outbound traffic.
- If the M Street/Isaac Hull Avenue entrance is one-way (reversible inbound and outbound traffic), the minimum cross section of Isaac Hull Avenue is two lanes.

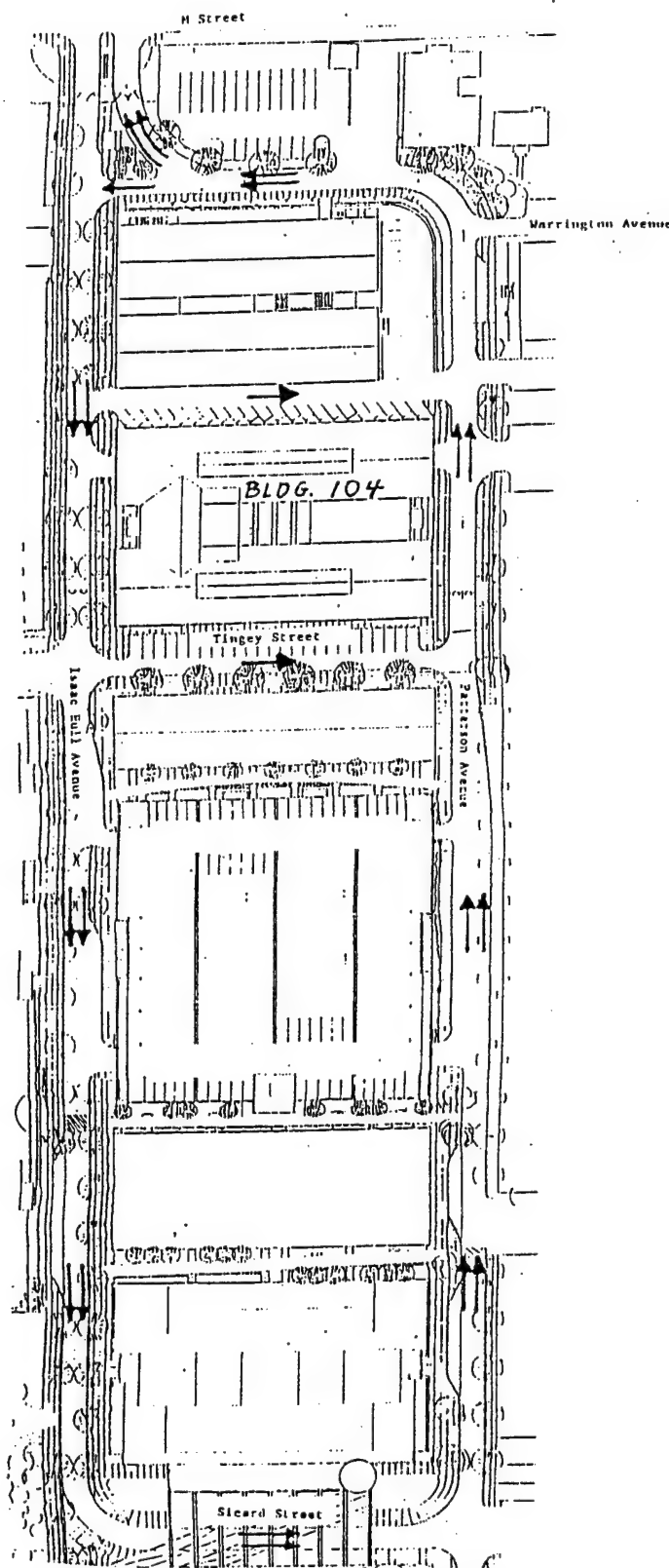
The assessment of Alternative 1: the SHG/JJR one-way circulation alternative revealed the following results:

- Garage access is adequate. (Desirable)
- Motorists would be able to circulate Building 104. There would be minimal excess circulation necessary for motorists parking at the southern curb of building 104 to access or leave these spaces. (Desirable)
- Motorists would be able to easily access and leave the parking available to the north of Building 104. (Desirable)
- Access to Patterson Avenue would be via Tingey Street, the garage and Sicard Street. (Multiple access - Desirable)
- Overall operations would remain consistent throughout the day. (Desirable)
- Maximum access to the WNY will be maintained throughout the day. (Desirable)
- Noise and traffic congestion at the residential quarters N and O are a concern during the PM peak hour. (Undesirable)
- The Isaac Hull Avenue/M Street entrance would require a minimum of a three-lane cross-section.

Figure 2.5 presents the preferred circulation pattern, Alternative 1, of the western portion of the WNY. Detailed analysis of all three circulation alternatives is documented and presented in Appendix F.



Figure 2.5, Navy Yard Western Portion Internal Circulation Pattern, Alternative 1



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## 2.5 Transportation Impact Assessment Summary and Recommendations

This section provides a summary of traffic operations that is anticipated with the BRAC actions and the parking constraints related to these actions.

### 2.5.1 Traffic Operations

The regional highway network serving the Washington Navy Yard and other waterfront developments in the area is constrained due to the amount of commuter traffic utilizing this transportation system. The regional highway network consists of South Capitol Street, Pennsylvania Avenue, the Southeast Freeway (I-395), and the Anacostia Freeway (I-295). These roadways are constrained by the limited number of lanes crossing the Anacostia River. The available bridges are the Frederick Douglass Memorial Bridge, the 11th Street Bridge, and the John Phillip Sousa Bridge. Studies have shown that the traffic volumes on these regional highways have remained constant or increased only slightly over the past decade. Due to the fact that these roadways are currently operating at or near capacity, it is anticipated that there will be very little additional traffic volume growth during the peak hours in the future. For these reasons the Washington Navy Yard will have limited impact on the peak hour traffic volumes on the regional highway network.

The BRAC actions will relocate a total of 5,400 employees to the WNY (4,100 from BRAC 95 and 1,300 from BRAC 93), bringing the total WNY employee population to 10,800. As part of the BRAC actions, the existing parking supply of 3,586 will be increased to 5,273 parking spaces to accommodate the projected parking demand of the increased WNY population and visitors to the WNY. The limitation on the number of employee parking spaces established by the WNY will curb the number of vehicular trips attracted to the WNY. As a result, the modal distribution of the total employee population of 10,800 would shift from single occupancy vehicles (SOVs) to increased carpooling, van pooling, and transit use. This limited parking supply would also affect the modal distribution of visitors to the WNY. NAVSEA alone currently receives 2,000 visitors daily. This would be in addition to base museums and special events visitors.

The projected trip generation will be 1,371 vehicles inbound and 317 vehicles outbound during the roadway network AM peak hour. This will be an increase of approximately 584 trips from existing conditions for the AM peak hour. Similarly, during the PM peak hour, the trip generation is 177 vehicles inbound and 1,284 vehicles outbound, thus resulting in an increase of 275 trips from existing PM peak hour conditions. The proposed opening of the Isaac Hull Avenue access point on M Street will help to redistribute these trips more by providing a third entrance along M Street. Consequently, more inbound and outbound vehicles can be accommodated during the roadway network peak hours.

The intersections expected to decrease in Level of Service is the signalized intersection of 11th Street S.E. and M Street S.E. and the unsignalized intersection of 7th Street S.E. and M Street S.E. Although the intersection of 11th Street S.E. and M Street S.E. decreases in LOS from LOS C to LOS D, it still operates at an acceptable LOS. The delay at this intersection results from the outbound WNY traffic leaving the WNY toward the I-295 on-ramps. At the M Street S.E. and

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the 7th Street S.E. intersection, the southbound 7th Street left-turn traffic (still only 80 vehicles) is expected to experience delays since the projected traffic along M Street S.E. has increased, therefore making it more difficult to cross. As discussed earlier, it is not desirable to signalize this intersection since signalization would induce more traffic along 7th Street S.E.

There is one intersection that will remain at an unacceptable LOS and will continue to operate at an unacceptable LOS. This intersection is the South Capitol Street, S.E. and M Street, S.E. intersection. This intersection will continue to operate at an unacceptable Level of Service due to the high volume of commuter traffic traversing through it.

### 3.0 TRANSPORTATION MANAGEMENT PLAN

The BRAC relocation of 5,400 Navy personnel to the WNY will increase the daytime employee level to approximately 10,800 personnel. In consideration of NCPC's 1:3 parking ratio and to reduce the impact to local traffic associated with the BRAC relocation, the Navy's project plans include limiting the development of new parking to 1,687 additional parking spaces. The addition of these spaces will bring the total of on base parking supply to 5,273 spaces, with 3,717 spaces designated for 10,800 employees. While this planned allocation will reduce the potential for impacts to local traffic, it will require the development and implementation of a detailed traffic management program.

This section outlines a transportation management plan which defines the demand reduction goals, lists measures to reach those goals, and presents organizational, monitoring, and evaluation suggestions to implement this plan.

The firm of Gorove/Slade Associates, Inc. (G/SA) has participated in an active role in providing traffic management consultation for the WNY BRAC actions. As transportation professionals, G/SA has been working with the Navy project design specialists, base personnel, and regional traffic authorities to evaluate, project, and analyze traffic conditions in and around the WNY resulting from BRAC actions. Throughout the entire design process, G/SA has been assisting planners and architects by identifying potential traffic problems, by discussing reasonable solutions, and by incorporating mitigation measures during project development. Additionally, G/SA has defined and developed additional transportation management measures to facilitate the effective operation of the WNY transportation system following the implementation of the BRAC actions. These mitigation measures are presented within this section of the TMP.

In conjunction with this plan, the WNY has performed several actions to limit the traffic demand to the site and to plan for the anticipated vehicular volume expected to utilize the local roadway network in and around the WNY. The Navy plans to create only a limited amount of additional parking in conjunction with the BRAC relocation projects. The parking constraints resulting from providing a limited parking supply will significantly reduce the number of additional trips to the roadway network generated by the increase in employee population. In addition, the proposed construction projects will incorporate physical changes to the infrastructure of the WNY in an effort to further mitigate effects of the additional traffic. Currently, the WNY manages traffic to a limited extent by implementing and enforcing a permit parking program, by directing specific traffic routes during peak periods, and by providing parking incentives for carpools. Parking management in the residential area in the vicinity of the WNY is currently implemented with the residential permit parking program established by the District of Columbia Department of Public Works (DCDPW).

The objective of this TMP is to define, develop, and implement transitional short and long-term transportation and parking policies, programs, and measures which will mitigate the traffic impacts of current and future WNY developments and contribute to energy conservation and environmental protection. The successful development, and implementation of an effective Transportation Management Plan is based on the establishment of clear and appropriate goals and

objectives. These goals address the key parking and transportation issues described in this document.

### 3.1 Goals

#### 3.1.1 Description of Goals

Several goals can be established as to determine the effectiveness of the traffic management measures. These goals should allow for effective coordination and compliance with regional traffic plans and regulatory programs and should be geared to minimize the effects of the mandated BRAC actions. These goals will be geared to make the best and most efficient use of the limited on-site parking facilities and to reduce traffic congestion, conserve energy, and improve air quality through reductions in the number of single occupancy vehicle trips to and from the WNY. The following delineates the goals that the WNY should set to implement an effective transportation system for its users:

1. **Long-term reduction of parking supply.** The existing employee to parking space ratio is 1.89. The anticipated Year 2001 employee to parking space ratio will be 3.0, not accounting for van-pool vehicles. Attempts to maintain this parking ratio of 3.0 employees per parking space, which was established in the Comprehensive Plan for the National Capital Region prepared by the National Capital Planning Commission (NCPC), should be made. The actual designation of the parking spaces will be established by the NDW.
2. **Increase the non-auto driver mode split.** The percentage of commuters who do not drive to work including car- and van-pool passengers but not drivers is currently 23%. A goal of approximately 29% for non-auto driver mode split coupled with a combined car- and van-pool usage of 31% would be desirable. These increases in non-single occupancy vehicle usage represents a decrease of approximately 20% in SOV usage. It is important to note that the entire employee population of 10,800, not only the relocated employees, are affected by this modal distribution goal.
3. **Increase the average passenger occupancy (APO) (total persons divided by vehicles).** The APO is currently 1.30 persons per vehicle. An eventual 1.6 persons per vehicle, or approximately a 25% increase by 1997 is recommended by the NCPC resolution of June 1993 urging all federal agencies with more than 100 employees to implement a vigorous TMP. The WNY would need to increase its APO to 2.23 persons per vehicle to reduce its parking demand to the level that can be accommodated by its proposed parking supply. It is important to note that The Final EIS-Eastern Portion of the Southeast Federal Center & General Services Administration Headquarters Building on the Eastern Portion of the Southeast Federal Center, prepared by GSA has cited an APO of 2.7 for the vehicles to the Southeast Federal Center.

## 3.2 Implementation

### 3.2.1 Description of TMP Strategies

This section contains the transportation management strategies which may be effective at reducing the traffic congestion and parking demand around and within the WNY. These transportation management strategies focus on controlling the traffic demand anticipated by the relocation of 5,400 employees to the WNY. These strategies include the following:

1. Parking Management
2. Ridesharing
3. Transit
4. Variable Work Schedules
5. Alternative Strategies

A description of how each group of strategies that may be used at the WNY is presented in this section.

#### o Parking Management

Parking Management is a set of strategies that all deal with the allocation, cost, and allowance of parking in the WNY and the neighboring area. If correctly designed, parking management strategies can be the most effective tool in reducing traffic congestion and parking demand. There are two types of parking management strategies identified and described below:

##### • Charge for Parking

Most employees, who have free parking and commute by private automobile, see their trip as being essentially free. Gasoline costs are sometimes factored in, but these are small amounts compared to other modes of transportation. However, when there is a charge for parking, the out of pocket cost for the option to drive becomes similar to the costs for other transportation modes. Therefore, when employees start to be charged for parking, there is very often a large shift in commuting behavior.

A cost for parking can be instituted in a variety of ways. A flat fee could be charged using daily collection or by selling monthly passes. Also, preferential rates could be given to carpools, and vanpools. Another indirect method can be used to charge for parking through the provision of transportation allowances. These allowances, given to all employees, allow bicyclists and walkers to pocket the money, transit users to apply the money as a transit subsidy, and employees who drive to work to apply it to cover parking costs.

Although there are restrictions placed on Federal agencies' abilities to charge for parking, options utilizing the transportation allowance concept may be acceptable. In addition, Congress has recently considered legislation that would allow Federal employees to be charged for parking.

- ***Parking space allocation***

Since there is a limited number of parking spaces that will be available at the WNY, the allocation of these spaces is critical to the success of the TMP. After the necessary spaces are designated for residents and visitors, an appropriate number of spaces should be allocated to each activity at the installation for senior officers, government vehicles, and handicapped parking. The remaining spaces should be designated as preferential parking for car/van pools and single occupancy vehicles. To implement this program, it would be necessary to identify vehicles by use and physically mark or identify parking space designations. The enforcement of appropriate parking and the identification of vehicles are critical to the effectiveness of this program.

Due to special events throughout the year and acts of nature (snow and flooding), several parking spaces may not be available. It would be beneficial to alert the WNY population of special events that would place a greater constraint on parking. Also, the overflow lots can be utilized for additional parking capacity for these events if greater security and shuttle bus service to these lots are provided.

- **Ridesharing**

Ridesharing consists of any vehicle that carries two or more employees or individuals to the WNY. This can consist of carpools, vanpools, and buspools. Ridesharing can be directly promoted through two strategies and indirectly promoted in conjunction with the other transportation management strategies listed in this section. The two direct strategies include a ridematching service and providing preferential treatment to ridesharers.

In order for carpooling and vanpooling to be effective in a site as large as the WNY, a ridematching service should be provided. This ride matching service should provide personalized assistance for individuals interested in joining and establishing carpools and vanpools. A ridematching service that encompasses the entire WNY will take advantage of the economies of scale and will increase the chance of possible matches.

In order to further support carpooling and vanpooling, preferential treatment should be provided to all ridesharers. This preferential treatment can take the form of preferential parking, benefits from transportation allowances, more flexibility in work hours, and if available, use of a guaranteed ride home program. These actions will make carpooling and vanpooling a more attractive option for employee commuters.



- **Transit**

TMP strategies to reduce vehicular trips and parking demands through increased transit ridership include providing additional transit services and transit subsidies. In order to enhance the already available transit services, (i.e. the Metrorail at the Navy Yard station and the Metrobus routes) that already service this area, an additional shuttle bus service that connects the Metrorail stations to the WNY would be desirable. Although many of these locations are within walking distance of the Metrorail station, the addition of a shuttle bus will make the Metrorail option more attractive.

The provision of transit subsidies are also another effective means of reducing vehicular traffic congestion. When transit subsidies are provided in conjunction with fee parking or a transportation allowance system, a further reduction in single occupant vehicle commuter trips can be achieved. Transit usage would also increase with the incorporation of a guaranteed ride home program, which is described later in this section.

- **Variable Work Hours**

Variable work hour programs can have many different effects and benefits depending on which programs are instituted. Three different variations are described in this section: Staggered work hours, flex-time, and the compressed work week/rotating day off.

- *Staggered work hours*

A system of staggered work hours over a one to two hour period can have the benefit of reducing the peak hour traffic volumes and congestion associated with the commuting periods. This program however does not necessarily reduce the on-site parking demand. Additionally staggered work hours can make it more difficult to carpool or vanpool if additional allowances are not made. This program does not reduce the parking demand, but it disperses WNY traffic throughout the AM and PM peak periods.

- *Flex-time*

A flex-time system can achieve many of the same benefits of staggered work hours. However, a flex-time system leaves the arrival/departure time decision to the individual employee. Flex-time systems are sometimes difficult to institute site-wide or even agency-wide due to agency needs. Some combination of flex-time with staggered work hours can achieve the benefits of both systems. This will stagger the arrival of vehicles across the site and provide the flexibility for individuals to utilize other modes of travel. Like the staggered work hours program, this program does not reduce the parking demand, but it disperses WNY traffic throughout the AM and PM peak periods.



- *Compressed work week/rotating day off*

This strategy allows employees to work their normal 40 hour work week in a shorter span of time. This may consist of four 10-hour work days with the fifth day off, or a schedule of nine 9-hour work days with the tenth day off every two weeks. In either case a 10 to 20 percent reduction in the number of commuters takes place on any one day. In many cases, employees desire to have a Monday or Friday off, however, a program can be used to manage the days off allowed. This program will reduce the parking demand for one day during each rotation of the work cycle schedule.

- **Alternative Strategies**

The alternative strategies listed and described in this section can be used in conjunction with the strategies described above. These programs can help make the other strategies more effective in reducing the peak hour traffic volumes and parking demand.

- *Telecommuting*

With the advance of computer systems and the Internet, telecommuting is becoming a much more realistic option. Telecommuting a couple of days or a single day per week can greatly reduce the number of employees that need to commute to the WNY . Since not all individuals who could take advantage of a telecommuting program have a computer at their disposal, telecommuting centers can also be used. The establishment of telecommuting centers outside of the WNY can reduce the number of employees that need to commute to the WNY during any given day.

- *Guaranteed ride home*

Many transportation management coordinators see the guaranteed ride home program as being a necessity to persuade employees to use transportation modes other than the single occupant vehicle. This program does not reduce parking demand at the site, but does provide an incentive to not use single occupancy vehicles. The guaranteed ride home program simply guarantees employees a ride home in the case of an emergency. The guaranteed ride home program can be accomplished in a variety of ways. These consist of taxi services, a short term auto rentals, use of existing fleet vehicles, shuttle services, or public transportation. Employees who have the comfort of knowing a guaranteed ride home is available will be more apt to use another means of transportation than the single occupant vehicle.

Other strategies can be implemented if they are tested and evaluated appropriately. Transportation management coordinators are encouraged to look for additional commuter incentive programs to discourage employees from using the single occupant vehicle. Employee focus groups and surveys are helpful in determining what the employee population needs in order to change their commuting behavior.

### 3.3 TMP Administration

#### 3.3.1 TMP Management

In order for the WNY to succeed in implementing its traffic and parking management programs, a transportation/parking management organizational structure should be established. Such an organization, to also serve as an employee transportation service office, should be staffed with a person whose responsibility will be to carry out and monitor the implementation of the TMP in coordination with other administrative agencies. The staff should also include parking enforcement personnel, traffic directors, and security staff who would be responsible for performing the necessary tasks in facilitating the implementation and enforcing the restrictions of all transportation and parking management services provided by the WNY.

This traffic and parking management staff would establish an employee transportation service office that is conveniently located. This office would be a central location for all transportation and parking information and would advertise potential alternatives to single occupancy vehicle commuting. Their responsibilities would include the initiation of promotional and marketing activities for transit service alternatives. The WNY should develop an adequate annual budget plan and investigate funding resources in order to finance this office as well as the strategies to implement services and activities associated with the transportation/parking management plan.

The Southeast Federal Center (SEFC) development is required by GSA to create a formal transportation management organization/association to manage its transportation operations. It would be very beneficial to both the WNY and the SEFC to coordinate their transportation management efforts in order to maximize the resources available to both institutions as well as to minimize the costs associated with any proposed transportation and parking management services.

Immediate planning for new traffic and parking strategies is essential in implementing effective traffic and parking management programs. This planning procedure would include the following tasks:

1. Designate the tasks of the traffic and parking management personnel.
2. Outline the computer hardware and software requirements for any proposed traffic and parking management strategies.
3. Establish computers interfaced with all activities at the Installation.
4. Assign points of contact for the various BRAC activities arriving at the WNY.
5. Schedule commuter parking surveys for monitoring purposes.
6. Coordinate with WMATA to determine bus rerouting and rescheduling possibilities.
7. Allocate parking spaces to the various tenants of the facilities.
8. Notify employees and visitors of planned traffic and parking strategies before implementation.

When implementing a new TMP strategy across the entire WNY, specific tasks need to be completed to provide for the opportunity for success and to assure that an appropriate and

accurate monitoring program is in place. Therefore, when implementing a new TMP strategy, the traffic and parking management staff would be responsible for performing the following tasks:

1. Identify the new TMP strategy to be implemented.
2. Define the measure of effectiveness for evaluating the TMP strategy (i.e. auto occupancy rate).
3. Conduct the appropriate survey to measure the current level of activity.
4. Set the desired level of activity or objective (i.e. increase the auto occupancy rate to 2.7 persons per vehicle).
5. Initiate a marketing program to inform the WNY employees about the availability and benefits of the new TMP strategy or program.
6. Implement the TMP strategy.
7. Conduct follow up surveys annually and determine the level of activity and measure success.
8. Continue, expand or eliminate the TMP strategy or program depending on the success.
9. Enforce parking designations.

It should be noted that it is often that multiple TMP strategies are implemented, expanded or eliminated at one time. Therefore, it is sometimes difficult to measure the success rate for a single program. Where possible, unique measures of effectiveness should be established for each new TMP strategy to be implemented.

### **3.3.2 Monitoring**

A successful TMP will include monitoring and evaluating the TMP's progress. Monitoring and evaluation plans, as described below, should be in place before any programs or strategies are implemented at the WNY. Monitoring and evaluation is necessary to determine which programs are effective and should be continued or expanded, and which programs are less effective and should be cut back or eliminated.

Once the WNY transportation and parking management office has been established, the monitoring and evaluation activities will be used to identify new strategies to be implemented that will be beneficial to the WNY employees and visitors. The availability, location, duration, and eventual cost of parking are key elements in controlling vehicle traffic generation. In order to ensure that parking policies are fully integrated with the objectives of the TMP, it is recommended that all parking policies, information, and operation functions be consolidated within this office. This office would be responsible for developing and maintaining a parking control and monitoring system and a long term parking management plan to achieve vehicle trip reduction goals.

In order to make informed decisions concerning the future direction of the WNY TMP and to answer questions concerning the success of the TMP, a detailed monitoring and evaluation plan needs to be in place. An effective monitoring plan is focused toward providing the information needed to evaluate the success of the TMP as stated in the goals and objectives. To effectively evaluate the success of a TMP, survey information should be compared before and after implementation of the proposed TMP measures. For this purpose, base information for the WNY

should be compiled on a periodic basis (monthly, semi-annually, annually, etc.) and compiled into a large database maintained by the transportation and parking management office.

An effective monitoring plan will cover two types of information: the actual transportation usage characteristics and the employee evaluation feedback. Both types of information help determine the effectiveness of a TMP. The transportation usage characteristics or quantitative measures consist of monitoring measurable data such as vehicle counts, parking space occupancy, persons per vehicle, etc. The employee evaluation feedback or qualitative measures consist of employee focus groups and survey information where employees rate the usefulness of various TMP programs.

In addition to the development of base information, a regular annual survey should be conducted to monitor the changes in the employee transportation behavior. Both quantitative and qualitative measures should be regularly surveyed. This will consist of annual traffic and parking counts, occupancy surveys, employee questionnaires, and employee focus groups.

The advances in transportation technology have been instrumental in facilitating the monitoring and evaluation of traffic and parking conditions in several major institutions across the country. As reconstruction and new construction takes place at the WNY, opportunities are available to install monitoring systems to provide information and feedback regarding the transportation usage in the WNY. As compared to annual monitoring programs, the installation of these systems could represent a significant cost savings over the life of the WNY. In addition, the information from monitoring systems can be made available to the WNY employee population to provide instant traffic and transportation information.

These systems, referred to as intelligent transportation systems (ITS), would improve the traffic conditions in and around the WNY and could provide information to the employees and to the transportation and parking management office such as the following: instant traffic conditions from the employee's desk; automated parking availability routing and signing; and automated Metrorail and bus location and schedule. ITS systems represent the future of traffic and transportation management. With the development of the WNY into a major employment center, ITS could be integrated to provide another means to reduce traffic congestion and monitor traffic conditions.

### **3.3.3 Evaluation**

The evaluation of a TMP is critical to the efficient management of the program. The evaluation of TMP strategies must be conducted to determine the effectiveness of the strategies. The evaluation process provides a standard of comparison for quantifying the effectiveness of each TMP measure implemented. This procedure identifies the ineffectual TMP strategies, which should probably be scaled back or discontinued, and the more effective and economical strategies, which should be continued or expanded.

A successful evaluation program depends heavily on the monitoring program. The monitoring program needs to provide consistent information which can provide a comparison from one cycle to the next and provide an overall historical perspective on the success of the TMP. Accurate

evaluation requires that new TMP strategies be implemented in a controlled manner as described under the implementation steps above.

Finally, the evaluation of various programs should be allotted enough time (usually a few years) to determine if a change in employee transportation behavior is occurring, but the transportation and parking management office needs to discontinue or lessen the intensity of TMP strategies or programs that are less effectual.

In conclusion, the progressive implementation of a TMP should be initiated as soon as possible and before successive WNY expansions are carried out. Implementation of a TMP would begin the process of shifting the current transportation modal distribution away from single occupancy vehicular usage and towards increased ridesharing and transit usage.

## APPENDIX C

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## **Appendix C: Response to Public Comments**

This appendix includes comments on the Draft Environmental Impact Statement (EIS) and the Navy's response to those comments. A copy of the transcript of the public hearing on the Draft EIS is included followed by a general response to comments during the hearing. Following that are copies of actual correspondence or comments and the Navy's response to those comments. Comments from Federal agencies appear first, followed by state/local governments, specific groups/organizations, and individuals. Specific questions or issues of concern have been identified/annotated with a number on the correspondence. Responses, corresponding to numbers, are located on a separate page, immediately following the comment correspondence. Responses to similar issues/questions sometimes reference appropriate previous responses.

The majority of public comments on the Draft EIS center around existing contamination at the Washington Navy Yard (WNY). This EIS, however, is designed to address the impacts associated with the development of additional office space at the WNY and other physical changes necessary to accommodate the Base Realignment and Closure (BRAC) relocation of the Naval Sea Systems Command (NAVSEA) to the WNY. Base-wide contamination and remediation are being administered through the Installation Restoration (IR) Program in coordination with the Environmental Protection Agency. While it would be inappropriate to discuss specific remedial actions to be carried out under the IR program in this EIS, additional information on contamination has been provided in this EIS. The opportunity for the public to participate and comment on base-wide cleanup efforts is provided through the Installation Restoration process. A Restoration Advisory Board (RAB) that includes community representatives is being formed as part of the base-wide cleanup efforts. For more information on the RAB, please contact Mr. David Forsythe at (757) 322-4783.

Data shows that contamination within the WNY includes subsurface petroleum and metals, and surface PCBs and lead. Specific areas of surface contamination are planned for remediation under the IR program beginning in 1997, which would eliminate the risks associated with this contamination. Risk of exposure to subsurface contaminants are limited due to hard surfaces covering most of the installation and are likely to occur only through ingestion of soils or groundwater. The construction contractor will be advised as the extent of contamination within the project site, and would be required to develop and implement a worker safety plan to protect workers. Contamination within the project-related buildings includes lead paint, asbestos, and small amounts of mercury and PCBs associated with switches, thermostats, and light fixtures. These contaminants are typically found within older structures and will be remediated in accordance with applicable regulations and established procedures. PCBs found on the floor in Building 197 are below cleanup levels and would be encapsulated or removed as part of project related construction.

## **Public Hearing**

### **Speakers at the Public Hearing:**

1. Ms. Lynn Sterrazza, Damon Whitehead (Sierra Club Legal Defense Fund)
2. Mr. Robert Boone (Anacostia Watershed Society)
3. Mr. James Connelly (Anacostia Watershed Society, Capital Rowing Club)
4. Mr. Brad Roth (Greenpeace)
5. Mr. Wayne Turner (Steve Michael for Ward 6)
6. Ms. Denise Johnson
7. Ms. Brenda Lee Richardson (Women Like Us)
8. Ms. Karen Sholegate
9. Mr. Timothy Rose
10. Ms. Christina Herman
11. Mr. John Capozzi
12. Ms. Rene Carter
13. Ms. Sarah Hines (Love Thy Neighbor)
14. Mr. Phillip Pannel (Anacostia Coordinating Council)
15. Mr. Frazier Walton (Kingman Park Civic Association)
16. Rev. George Stallings (Imani Temple)
17. Ms. Dorothea Ferrell
18. Mr. Brent Blackwelder (Friends of the Earth)
19. Mr. Howard Croft (Anacostia Coordinating Council, Anacostia Economic Development Corporation)

### **Federal Agencies**

1. Commission of Fine Arts
2. National Capital Planning Commission - Griffith
3. National Capital Planning Commission - Simon
4. Army Corps of Engineers, Baltimore District
5. U.S. Department of the Interior
6. U.S. Department of Transportation / FHWA
7. U.S. Environmental Protection Agency

### **State/Local Governments**

9. DC Preservation League
10. Arlington County, Virginia Office of the County Board
11. Arlington Chamber of Commerce

### **Groups / Organizations**

12. Anacostia Watershed Society
13. Barry Farm Resident Council
14. Greenpeace
15. Greenpeace - O'Keefe
16. Interstate Commission on the Potomac River Basin 2/10/97 with 6/6/96
17. Love Thy Neighbor
18. Sierra Club Legal Defense Fund
19. American University, Washington College of Law, Public Interest Law Clinic
20. American University, Washington College of Law, Public Interest Law Clinic
21. Women Like Us - Richardson



## **Individuals**

- 22. Denise Johnson
- 23. Timothy Rose
- 24. Karen Szulgit
- 25. David Saunders
- 26. Lorraine Griffin

DEPARTMENT OF THE NAVY  
UNITED STATES OF AMERICA  
PUBLIC HEARING

NAVAL SEA SYSTEMS COMMAND (NAVSEA)  
HEADQUARTERS RELOCATION

Draft Environmental Impact Statement  
(Draft EIS)

January 23, 1997

Washington Navy Yard  
Catering Center, Crystal Room  
Building 101  
901 M Street, SE

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## P R O C E E D I N G S

(7:10 p.m.)

MR. WALKER: Please find a seat.

We'll start just momentarily.

(Pause)

MR. WALKER: Again, if everyone could find a seat, please, and we'll begin.

(Pause)

MR. WALKER: Good evening, ladies and gentlemen. I'd like to welcome everyone here tonight and thank you for coming. My name is Larry Walker with the firm of Louis Berger and Associates in Washington, D.C.

My company has been selected by the Navy to assist in the preparation of an environmental impact statement assessing the effects of several projects at the Washington Navy Yard designed to accommodate the relocation of the Naval Sea Systems Command.

With me on stage is Mr. John Imperato, the base realignment and closure coordinator for the Naval District

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1 Washington. Also present this evening is a  
2 sign language interpreter. I would ask if  
3 there is anyone here who -- in the  
4 audience -- who requires the services of the  
5 interpreter to please raise their hand.

6 (Pause)

7 MR. WALKER: If not -- it appears  
8 that one is not required. The interpreter  
9 may take a seat. Thank you very much.

10 Mr. Imperato will speak to you  
11 shortly about BRAC actions and alternatives  
12 to be addressed in the draft environmental  
13 impact statement. But first I would like to  
14 briefly explain the NEPA process and public  
15 involvement.

16 We will occasionally use acronyms  
17 in this presentation and will explain what  
18 these mean as we go along. Tonight's public  
19 hearing is one step in a process designed to  
20 evaluate potential impacts of the Navy  
21 actions needed to implement base realignment  
22 and closure, or BRAC, recommendations.

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1           The National Environmental Policy  
2 Act, or NEPA, was established over 25 years  
3 ago as a way to ensure that federal agencies  
4 considered the effects of proposed actions on  
5 the environment and to ensure that those  
6 impacts are considered in the decision making  
7 process.

8           Federal projects that are  
9 anticipated to have significant effects to  
10 the human environment require the preparation  
11 of an environmental impact statement.

12 Federal regulations developed through the  
13 President's Council on Environmental Quality,  
14 CEQ, established the EIS process and mandated  
15 review periods.

16           The EIS process begins with a  
17 scoping process and a public scoping meeting.  
18 During the scoping process, the federal  
19 agency informs other government agencies,  
20 interest groups, and the public of its  
21 planned action and asks that they identify  
22 their concerns relative to the action or

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1 issues to be examined and analyzed in the  
2 environmental impact statement.

3 The public was notified of the  
4 Navy's intent to prepare an EIS addressing  
5 the effects of the relocation and associated  
6 projects at the Washington Navy Yard.

7 Correspondence was also sent to various  
8 agencies and interested public. The public  
9 scoping meeting for this EIS was held on May  
10 18, 1996, at the Hines Junior High School in  
11 Washington, D.C.

12 Following the scoping process, the  
13 lead agency, which in this case is the U.S.  
14 Department of the Navy, prepares a draft EIS  
15 that provides details on the proposed action  
16 and analyzes the potential effects on the  
17 environment resulting from implementation.  
18 Comments received during the scoping period  
19 are incorporated into the draft EIS.

20 The draft EIS was prepared and  
21 distributed for review to federal, state, and  
22 local regulatory agencies, as well as other

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1 groups and individuals that expressed an  
2 interest in participating in the EIS process.

3 Public notices on the availability  
4 of the draft EIS document and its public  
5 hearing were published in the Federal  
6 Register and local newspapers in December  
7 1996. These notices mark the beginning of a  
8 45-day public review whereby comments on the  
9 draft EIS may be provided to the Navy.

10 Tonight's public hearing offers an  
11 additional way of providing comments on the  
12 draft EIS. The sole purpose of this meeting  
13 is to receive all comments on the DEIS which  
14 assesses the project requirements to  
15 accommodate NAVSEA personnel to the  
16 Washington Navy Yard.

17 All public, government agency, and  
18 other comments received during this period  
19 will be reviewed, considered, and addressed  
20 in the final EIS. A 30-day comment period  
21 will follow distribution of the final EIS.  
22 Based on comments received, the Navy will

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1 issue a record of decision identifying the  
2 actions to be taken at the Washington Navy  
3 Yard to accommodate NAVSEA personnel. This  
4 decision will be published in the Federal  
5 Register.

6 A draft EIS has several components.  
7 These include description of the proposed  
8 action, purpose and need of the proposed  
9 action, alternatives evaluated in the EIS  
10 document, the existing environment of the  
11 project site, and the environmental  
12 consequences of implementing the proposed  
13 action or alternatives.

14 The draft EIS defines the proposed  
15 action, the purpose and need for the action,  
16 and the alternatives the agency has examined  
17 to fulfill their requirements. It then  
18 identifies the existing or baseline  
19 environment, including natural resources,  
20 soils, water quality, air quality, cultural  
21 resources, and socioeconomic conditions, and  
22 the impacts expected to result from

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1 implementation of each of the alternatives.

2 The document also identifies  
3 agencies, groups, and individuals that  
4 participated in the development and the  
5 preparation of the draft EIS.

6 The proposed schedule for the EIS  
7 documentation is shown here. As you can see,  
8 the notice of availability and public hearing  
9 for the draft EIS were published in the  
10 *Federal Register* on December 27, 1996.

11 The final EIS will incorporate the  
12 comments received during the 45-day review  
13 period and is expected to be available by  
14 early April 1997. The Navy expects to  
15 complete the EIS process in mid-May with the  
16 issuance of its record of decision.

17 I would like to turn the floor over  
18 now to Mr. John Imparato so that he can tell  
19 you a little bit about the draft  
20 recommendations and the Navy's proposed  
21 actions in the Washington Navy Yard.

22 Following Mr. Imparato's

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1 presentation, we'll be taking comments from  
2 the audience. We ask that you please wait  
3 until the end of the presentation, then we  
4 will open the meeting to allow you to provide  
5 your comments on the draft environmental  
6 impact statements.

7 MR. IMPARATO: Good evening. I'm  
8 John Imparato, the base closure coordinator  
9 for Naval District Washington.

10 The Defense Base Closure and  
11 Realignment Act was created by Congress to  
12 provide a process whereby military bases and  
13 other facilities could be closed or  
14 realigned. The act established a commission  
15 to review Secretary of Defense  
16 recommendations for base closure and  
17 realignment.

18 The Secretary's recommendations  
19 were based on criteria approved by Congress,  
20 including military value, return on  
21 investment, and environmental and economic  
22 impact, the commission's recommendations

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1 following an analysis of military assets and  
2 requirements, as well as public hearings held  
3 throughout the country.

4 The commission's recommendations  
5 were sent to the President and then to  
6 Congress for approval. The decisions  
7 resulting from the BRAC process have the  
8 force of law, and the decisions regarding the  
9 realignments have specific time lines for  
10 actual implementation.

11 The commission provided  
12 recommendations for closure and realignment  
13 in '91, '93, and 1995. The 1995 commission  
14 included changes to previous BRAC  
15 recommendations. One of these was the  
16 redirection or reassignment of NAVSEA  
17 headquarters from the 1993 recommendation to  
18 go to White Oak, Maryland.

19 This redirected NAVSEA headquarters  
20 to the Washington Navy Yard or any other  
21 government-owned space in the metropolitan  
22 D.C. area. The decision also redirected

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1 several smaller activities that were to come  
2 to the Navy Yard to other installations.

3 Naval Sea Systems Command  
4 headquarters currently operates in leased  
5 space in Arlington, Virginia. It transforms  
6 requirements into capabilities through  
7 research, development, engineering, design,  
8 purchasing, maintenance, and logistics  
9 support of ships, systems and munitions.

10 NAVSEA headquarters provides legal,  
11 financial, logistics direction and oversight.  
12 Naval Sea Systems headquarters manages  
13 acquisition and life cycle support of Navy  
14 and Coast Guard ships, submarines and combat  
15 support systems.

16 It is an administrative  
17 headquarters. It will not change the nature  
18 of that administrative headquarters with its  
19 relocation to the Washington Navy Yard. We  
20 expect that it will require about a million  
21 square feet of office space, as well as  
22 parking for additional vehicles, to

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1 accommodate their operation in the Navy Yard.

2 The draft EIS addresses the BRAC  
3 process and realignment decisions and focuses  
4 on the effects of the relocation and the four  
5 alternatives. The draft EIS and this hearing  
6 is not for the purpose to address other  
7 actions or projects.

8 Next slide.

9 This slide shows the location of  
10 the Navy Yard within the southeast quadrant  
11 of Washington, D.C. The areas that have been  
12 identified for development are in the western  
13 portion of the Navy Yard, all around here.  
14 Buildings in this area were historically used  
15 for industrial or manufacturing purposes.

16 The alternatives analyzed in the  
17 EIS center around nine buildings, building  
18 28, 73, 104, 142, 143, 176, 197, 198, and  
19 201. Those buildings are here and up this  
20 list and down here, a couple over here. It  
21 would involve a combination of demolition,  
22 renovation, and some new construction.

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1           Some of these buildings were  
2 constructed as additions to existing  
3 buildings. Most are in close proximity to  
4 each other. About half of the existing space  
5 within these structures is currently vacant.  
6 Some have gone -- undergone partial  
7 renovation or conversion from their original  
8 construction.

9           This is alternative one. It  
10 proposes that an office building be added to  
11 the existing building 197, renovation of 104,  
12 demolition of building 143 and 28, the  
13 construction of a parking garage, renovation  
14 of the first floor of building 176,  
15 demolition of building 201, 142, and 198, and  
16 construction of a four story office building  
17 on that site. This is the Navy's preferred  
18 alternative.

19           Under alternative two, a parking  
20 garage would be built in the existing parking  
21 lot next to building 197. 143, 28, and 176  
22 would be renovated into new office space.

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1 104 would be renovated into office space, and  
2 201 would be renovated into office space.

3 In alternative three, building 197  
4 would become a seven-level parking garage,  
5 104 would be renovated into a three-story  
6 office building, 73 would be renovated into  
7 office space, 143, 28, 176, 201, 198, and 142  
8 would be demolished and new office space  
9 would be created.

10 In this version, which is very  
11 similar to alternative three, this building  
12 would have two levels of parking as well.  
13 And this building would be partly office and  
14 partly parking. And 197 would be partly  
15 office and partly parking.

16 All of these alternatives have  
17 certain things in common. There will be some  
18 street modification, landscaping, excavation  
19 for storm water control or utility  
20 connectors. The Isaac Hull Gate up here on M  
21 Street would become the major access point  
22 for traffic on the west side of the Yard.

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1 Traffic would be routed in a circular pattern  
2 around the Yard to improve flow.

3 The majority of the paved surfaces  
4 around 197 and the sea wall will be removed  
5 and landscaped. New landscaping and trees  
6 would also be planted around buildings and  
7 along roadways.

8 The area between building 116 and  
9 the sea wall would also be landscaped to  
10 accommodate CHILA (phonetic) plant components  
11 and improve the site conditions.

12 I turn you now to Mr. Walker.

13 MR. WALKER: The key issues  
14 addressed in this draft EIS are those related  
15 to the actions associated with each of the  
16 alternatives to accommodate the BRAC  
17 relocation. The key issues identified at  
18 this time include traffic, cultural  
19 resources, air quality, water quality, and  
20 socioeconomics and community services.

21 The increase of personnel at the  
22 Washington Navy Yard has the potential to

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1 impact local traffic. In an effort to  
2 mitigate these impacts, the Navy proposes to  
3 limit the number of new parking spaces  
4 constructed at the Navy Yard and modify  
5 traffic routing on base. A traffic  
6 management plan has also been developed for  
7 the installation.

8 Minor impacts to the regional  
9 traffic and air quality are expected to  
10 result from the relocation since NAVSEA  
11 personnel already commute in the Washington,  
12 D.C., metropolitan area, and restricted  
13 parking at the Washington Navy Yard will  
14 limit the number of employee vehicles added  
15 to local traffic.

16 To minimize the impacts to water  
17 quality, erosion and sediment controls will  
18 be employed during construction. The project  
19 will also include storm water control  
20 structures and the conversion of hard surface  
21 to vegetation along areas of the waterfront.

22 The Navy has undertaken a detailed

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1 study of historic resources associated with  
2 the project site and will continue to work  
3 with local agencies such as the D.C. Historic  
4 Preservation officer and the Advisory Council  
5 on Historic Preservation, as well as other  
6 cultural resource specialists to mitigate  
7 project related effects.

8 The resulting increase in office  
9 space and day time population at the  
10 Washington Navy Yard will provide employment  
11 and sales opportunities for the local  
12 community. The proposed option is not  
13 expected to have any effect on the police,  
14 fire, ambulatory, or other public services  
15 currently provided to the community.

16 As stated previously, the purpose  
17 of tonight's meeting is to provide an  
18 opportunity for you to comment on the draft  
19 EIS which assesses projects to accommodate  
20 NAVSEA personnel at the Washington Navy Yard.

21 We will not be answering specific  
22 questions at tonight's meeting, but will

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1 instead evaluate your comments and address  
2 them in the final environmental impact  
3 statement.

4 Sign-up sheets were available as  
5 you entered the meeting room for individuals  
6 wishing to speak at tonight's meeting. I  
7 will be calling upon those individuals who  
8 indicated their desire to speak at the  
9 meeting here tonight. Those individuals that  
10 wish to speak but have not yet signed up are  
11 asked to raise your hand.

12 Is there anyone else who hasn't had  
13 an opportunity to sign up?

14 (Show of hands)

15 MR. WALKER: Okay. We have  
16 personnel in the audience who will provide  
17 you with a sign-up card if that is the case.  
18 Please provide your name on the card and the  
19 group or organization, if applicable. We  
20 will collect the cards so that we can call on  
21 you in order later.

22 If you would prefer to provide

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1 written comments, you may address them to the  
2 address on this slide. Comments should be  
3 mailed before February the 10th.

4 When called upon, speakers are  
5 asked to use the microphone that we have  
6 placed before you. This will allow the  
7 reporter to transcribe your comments for the  
8 public record, and others in the audience to  
9 hear your comments. Speakers are asked to  
10 state your name and affiliation, if any,  
11 prior to voicing your comments on the draft  
12 EIS.

13 In the interest of time, we ask  
14 that speakers limit themselves to five  
15 minutes of oral comments.

16 To facilitate the process, I'll be  
17 timing speakers and hold up a yellow card at  
18 the end of four minutes to allow you time to  
19 sum up your concerns or comments.

20 I will hold up a red card when the  
21 speaker's time has expired. And I would ask  
22 that you relinquish the floor at that time so

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1 that we may hear from others who are  
2 interested in speaking tonight.

3 Please remember that we will not be  
4 answering any questions at tonight's meeting,  
5 but all comments will be recorded by the  
6 stenographer as part of the public record,  
7 and your comments will be addressed in the  
8 final EIS. We would gladly accept any  
9 prepared statements as well.

10 I have a list of individuals that  
11 have already signed up to speak tonight. And  
12 when I call your name, if you would please  
13 come forward to the microphone.

14 Mr. Damon Whitehead.

15 MS. STERRAZZA: (Inaudible) in the  
16 audience?

17 MR. WALKER: Certainly.

18 MS. STERRAZZA: Hi. I'm Lynn  
19 Sterrazza, and this is Damon Whitehead.  
20 We're attorneys with the Sierra Club Legal  
21 Defense Fund, and we represent Barry Farm  
22 Resident Council, the Kingman Park Civic

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1 Association, and Anacostia Watershed Society,  
2 and Friends of the Earth in a lawsuit against  
3 the Navy to clean up the Washington Navy  
4 Yard.

5 We are here tonight at a very  
6 historic site listed on the National Register  
7 of Historic Places. A lot of the buildings  
8 around here are almost 200 years old. That's  
9 not the only thing here that is almost two  
10 centuries old.

11 What the Navy hasn't told you is  
12 that the lead, mercury, arsenic, and PCBs in  
13 the soil, in the groundwater, in the storm  
14 sewers, and in the Anacostia River are all  
15 also almost two centuries old.

16 These things are not on the  
17 National Register list of historic places,  
18 but they could get the Navy listed as a  
19 superfund site.

20 How did the Navy become so  
21 polluted?

22 Well, beginning in about 1800, the

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1 Navy began shipbuilding operations and then  
2 expanded to large weapons manufacturing and  
3 explosives testing. This continued for about  
4 150 years until the early 1960s, and in the  
5 process the Navy used a variety of metals and  
6 chemicals, like lead, mercury, arsenic, and  
7 PCBs.

8 All of this took place well before  
9 any environmental regulations were in place,  
10 so it is not surprising that all of these  
11 toxic substances after two centuries of Naval  
12 operations are found throughout the entire  
13 Navy Yard. They are in the soils, they are  
14 in the groundwater, they are in the storm  
15 sewers, and they're in the Anacostia River.

16 Right here at the Navy's doorstep  
17 is the most toxic point in the Anacostia  
18 River. This is something that the D.C.  
19 Government knows, that EPA knows, and that  
20 the Navy knows. But the Navy hasn't done  
21 anything to address it.

22 Two different studies that have

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1        been done on the Anacostia River come to the  
2        same conclusion, that the sediments right  
3        here have the highest levels of PCBs, lead,  
4        mercury, and other chemicals of any point in  
5        the river.

6                This chart, which was graphed by  
7        the D.C. Government, shows that the levels of  
8        PCBs in the river spike dramatically right at  
9        the Navy Yard, right here in front of this  
10       site. These two boxes here, documents that  
11       we have gotten from the Navy and EPA, show  
12       the Navy for decades has known about the  
13       lead, known about the arsenic, known about  
14       the PCBs, and know that they cause the  
15       problem.

16               What the Navy hasn't done is the  
17       studies to show that they can actually --  
18       they can actually fix the problem.

19               The Navy now plans to do  
20       construction here at the Navy Yard. But they  
21       are not planning to remediate the Navy Yard  
22       to stop the toxic pollution from entering the

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1 river and from threatening the community.

2 It's time that the Navy takes  
3 responsibility, cleans up the Navy Yard, and  
4 cleans up the river. The U.S. military is  
5 one of the worst polluters in the country.  
6 We have over 20,000 contaminated sites at  
7 1800 bases nationwide. This is an outrage to  
8 the communities that live near these sites,  
9 and it is an embarrassment to the government.

10 The Chief of Naval Operations,  
11 Admiral Jay Johnson, is headquartered right  
12 here at the Navy Yard. This is the second  
13 highest position in the Navy, second only to  
14 Secretary Dalton at the Pentagon. Admiral  
15 Johnson and the Navy Yard should be setting  
16 an example for how the Navy operates.  
17 Instead, they're an embarrassment.

18 It is time for the Navy to take  
19 responsibility now, clean up the Navy, clean  
20 up the Navy Yard, and clean up the Anacostia  
21 River.

22 (Applause)

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1 MR. WHITEHEAD: My name is Damon  
2 Whitehead. I'm also an attorney of the  
3 Sierra Club Legal Defense Fund working with  
4 communities to fight the -- not toxic wastes  
5 at the Washington Navy Yard. Responsibility  
6 is the main issue here. You may ask why.

7 The Navy has taken responsibility  
8 at other sites throughout the United States.  
9 Right here in D.C., the Navy is conducting a  
10 similar clean-up at the Naval Station in  
11 upper Northwest, close to Glover Park. The  
12 Navy found PCBs from past Naval operations.  
13 There, in the midst of an affluent  
14 neighborhood, the Navy immediately took  
15 responsibility, formed a partnership with the  
16 community, and initiated plans to clean up  
17 the site.

18 In contrast, here in Anacostia, the  
19 Navy has known for decades about the severe  
20 contamination, but has not initiated a  
21 clean-up and has never informed the  
22 community. Residents here know less about

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1 the Naval operations at the Washington Navy  
2 Yard and the contaminations at this site than  
3 they do about Whitewater.

4 Now the Navy says that it is  
5 planning to do something. It is going to  
6 relocate 4100 employees to the Navy Yard in  
7 buildings that the Navy admits are  
8 contaminated. These buildings are  
9 contaminated with the same pollutants found  
10 throughout the site. The Navy says they will  
11 make sure the buildings are safe for their  
12 own personnel.

13 But what about cleaning up the rest  
14 of the site to protect the health of the  
15 community? It is known that these  
16 contaminants are getting into the river, and  
17 anyone coming into contact with the river or  
18 even fish from the river are at risk.  
19 Community members are also possibly being  
20 exposed simply by breathing the air.

21 The Navy's refusal to do anything  
22 is not only an atrocity for the Navy, but for

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1 the whole administration. President Clinton  
2 signed an executive order in 1994 directing  
3 federal agencies to address environmental  
4 injustice, to address the fact that many of  
5 the federal government's actions and  
6 inactions disproportionately affect people of  
7 color and low income communities.

8 The Government's inactions here  
9 speak louder than words. Here in Anacostia,  
10 an African American community, the Navy has  
11 sat idly by for decades without informing the  
12 community of a potential health risk that  
13 they face from the Navy's hazardous waste.

14 In fact, at the last public hearing  
15 held here in May, the few community members  
16 that got word of the meeting received notices  
17 in the mail after the meeting took place.

18 All of this stands in stark  
19 contrast to the Navy's quick response to PCB  
20 contamination in affluent upper Northwest.  
21 What is happening here in Anacostia wouldn't  
22 be tolerated in Northwest.

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1 In short, we want the Navy to do --  
2 to end this don't ask, don't tell policies  
3 here in Anacostia. We ask the Navy to do --

4 (Applause)

5 MR. WHITEHEAD: We ask the Navy to  
6 do three things. One, take responsibility  
7 for pollution at the Navy Yard. This means  
8 accepting the fact that it is your pollution,  
9 and you need to get rid of it. Two, keep the  
10 community informed and involved in the  
11 process. And three, immediately begin  
12 clean-up at the Navy Yard and Anacostia River  
13 with the community has your partner.

14 Take your own slogan to heart:  
15 Full steam ahead with the clean-up. Thank  
16 you.

17 (Applause)

18 MR. WALKER: Thank you. The next  
19 speaker, Dorothea Ferrell.

20 (Pause)

21 MR. WALKER: Ferrell -- am I  
22 pronouncing that correctly?

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(Pause)

MR. WALKER: I'll go to the next speaker and we'll come back to Ms. Ferrell.

AUDIENCE MEMBER: (Inaudible)

MR. WALKER: Pardon me?

AUDIENCE MEMBER: Did you say (inaudible)?

MR. WALKER: Dorothea Ferrell. We'll come back to Ms. Ferrell.

Mr. Robert Boone.

MR. BOONE: Good evening, ladies and gentlemen. My name is Robert Boone. I'm director of the Anacostia Watershed Society. I'm sorry to have to read this, but it's a complex subject here.

On behalf of the board members of the Anacostia Watershed Society, I'd like to commend the Secretary of the Navy, Mr. John Dalton, Chief of Naval Operations, Admiral Jay Johnson, and others responsible for the wise decision to relocate these 4,000 Navy jobs in our federal city.

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1           This decision reflects a sound  
2 understanding of critical economic needs of  
3 our federal city. And perhaps more  
4 important, there won't be 4,000 automobiles  
5 commuting on a freeway to some new facility  
6 carved out of our diminishing green space, an  
7 excellent example to the solution to sprawl  
8 development, one of our biggest threats to  
9 our local air quality, environment, and the  
10 bay.

11           The society has been active since  
12 '89, working to restore the river. Adopting  
13 the language from the Clean Water Act, or  
14 goal is for a swimmable and fishable river by  
15 the year 2000. With the help of 10,000  
16 volunteers, we have removed 200 tons of  
17 debris from the river, planted 6,000 trees,  
18 and provided 2,000 local people with a canoe  
19 tour on the Anacostia River.

20           We are not working to provide a  
21 safe habitat only for fish and birds. We are  
22 fully committed to improving the quality of

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1 life for people who live here in the  
2 watershed, along M Street, Pennsylvania  
3 Avenue, Benning Road, Suitland Parkway -- the  
4 entire region.

5 And this is what brings us to the  
6 hearing tonight. During the summer, for the  
7 past two decades, it may be 110 degrees in  
8 the shade around here, but you won't see  
9 anyone swimming in the river. This is a  
10 great resource denied. Everyone knows the  
11 river is a toxic dead zone. That is what  
12 brings us to this hearing.

13 When receiving a copy of the draft  
14 environmental impact statement, I looked  
15 forward to reading about an honest treatment  
16 to the toxic conditions of PCB leaks and  
17 contaminated soils documented to the EPA at  
18 the Washington Navy Yard since 1981.

19 Reading the document, I looked  
20 forward to a new good neighbor policy to  
21 assure the health of the new Navy workers and  
22 their future generations, the health of local

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1 citizens and their children who live nearby  
2 the Navy Yard, and those of us who live  
3 downstream and use the river.

4 The good neighbor was not there in  
5 this document. After reading the document  
6 twice, I couldn't believe the cavalier way  
7 the PCB contamination was handled. If you  
8 would bear with me, I will review an outline  
9 of how PCBs affect one aspect of human  
10 development.

11 We are talking about a chemical  
12 that creates brain damage -- brain damage,  
13 particularly in fetuses, the newborn, and  
14 young children. This translates to low IQ,  
15 poor reading comprehension, attention  
16 deficit, and memory problems.

17 I will provide this information  
18 from *The New England Journal of Medicine*,  
19 September 12, 1996, according to (inaudible)  
20 Environmental and Health Weekly. It is  
21 especially noteworthy that children's  
22 intellectual deficits correlate most closely

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1 with mother's overall fish consumption.

2 The data indicate that those  
3 children were harmed most by PCBs passed to  
4 them by their mothers prior to birth. It was  
5 the mother's cumulative lifetime exposure to  
6 PCBs that lowered their children's IQs.

7 In other words, exposure of females  
8 to PCBs at any time in their lives before  
9 they bear children will eventually translate  
10 into mental defects in their offspring. This  
11 is ongoing and ongoing for years. It has  
12 been here in the river. The Anacostia River  
13 is one of three targeted hot spots in the  
14 entire Chesapeake Bay system. The Navy Yard  
15 is by far the most toxic, contaminated area  
16 in our city, our region.

17 I make this observation, this  
18 statement of fact, with no intent to cast  
19 blame as to who may have caused this problem.  
20 Our task is to assure that responsible people  
21 are informed so that responsible actions are  
22 promptly taken to remove this unnecessary

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1 threat to the public health.

2 In partnership with several other  
3 citizen groups, the society filed a claim  
4 that the Navy Yard was in violation of the  
5 Clean Water Act due to the continuing high  
6 concentrations of PCBs. As a responsible  
7 neighbor, we expected the Navy to respond  
8 with a clean-up plan to inform the community  
9 about their intentions.

10 A year passed, no word. We have a  
11 bomb in our community, yet the people most  
12 able to disarm and eliminate this problem  
13 have slammed the door in our face. This  
14 impact statement only adds insult to injury.

15 Page 4-20, section 4.4, Hazardous  
16 Waste and Materials, the last paragraph:  
17 "The movement of subsurface materials  
18 resulting from infiltration in the proposed  
19 waterfront park area is not expected to  
20 significantly change the movement that  
21 currently occurs through tidal action in this  
22 area."

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1           How are we to understand 227 parts  
2 per million in the sediments out front of the  
3 Navy Yard in the river? The count is not  
4 high either above or below this site. In  
5 other words, the high counts of PCBs are at  
6 the Navy Yard, in the sediments of the river.

7           MR. WALKER: Excuse me, sir. If  
8 you could conclude, please.

9           MR. BOONE: Yellow light?

10          MR. WALKER: Thank you.

11          MR. BOONE: So I have as questions  
12 for those in charge of the environment here  
13 at the Washington Navy Yard, who probably  
14 guided the development of this EIS: How many  
15 females of childbearing age are presently  
16 working at the Navy Yard, and have they been  
17 informed of the exposure risks and long-term  
18 risks of working at this site?

19               How many females of childbearing  
20 age living in the nearby community have been  
21 informed of this risk?

22               The U.S. Navy is charged with

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1 looking after interests of the United States  
2 and far corners of the planet. Why is the  
3 Navy not concerned about its neighbors here  
4 in the federal city? We are asking that you  
5 turn a new leaf and take responsibility for  
6 your history and our future.

7 We expect to hear from you about  
8 PCB clean-up plans in the very near future  
9 and on a regular basis until it is resolved.

10 Now that you are anticipating new  
11 construction, this is the appropriate time.

12 Thank you.

13 (Applause)

14 MR. WALKER: Mr. James Connelly.

15 MR. CONNELLY: Well, I'll be brief.

16 I'm James Connelly. I'm representing the  
17 Anacostia Watershed Society, as well as the  
18 Capital Rowing Club.

19 The Capital Rowing Club is a  
20 community based rowing organization. We row  
21 on the Anacostia River, and we practice there  
22 from March through November five days a week.

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1 We store our boats directly next to the Navy  
2 Yard property underneath the 11th Street  
3 Bridge.

4 And I just wanted to express my  
5 concern that this draft EIS, as has been said  
6 tonight, does not address the issues of PCBs  
7 and other contaminated soils and sediments.  
8 Rowing out on the river and also working with  
9 the Anacostia Watershed Society, we take  
10 people down the river regularly on tours  
11 trying to promote the river and bring  
12 attention to the problems here.

13 When we row, we don't really  
14 know -- you know, we are out there, we are  
15 not really informed of what is going on. And  
16 then when we hear of things such as this  
17 draft EIS that does not at all address the  
18 concerns, the health concerns, it is quite  
19 alarming.

20 So I'd like to urge the Navy to  
21 please consider the PCB contamination and  
22 other health issues, not only for the rowers

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1 and the people that work for the Anacostia  
2 Watershed Society, but also for members of  
3 the community who live around here, and also  
4 for the employees who will be here working.

5 Thank you.

6 MR. WALKER: Thank you very much.

7 (Applause)

8 MR. WALKER: Brad Roth.

9 MR. ROTH: Good evening. Good  
10 evening. My name is Brad Roth, and I'm with  
11 the environmental group Greenpeace. And I'm  
12 glad we are able to come together tonight to  
13 discuss this issue.

14 We began last -- a couple of years  
15 ago looking into the reasons for why the  
16 Anacostia River had such a high amount of  
17 PCBs in the water and in the fish and in the  
18 soils of the Anacostia River. And in doing  
19 research, we found out that many people said  
20 that it was nonpoint source pollution, which  
21 means that it is coming from sewer runoff.

22 They said we don't -- we don't have

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1 any way to explain where it is coming from  
2 and why it is that the levels are so high.

3 So we were interested in this. The  
4 mortality, infant mortality, rates and the  
5 cancer rates in southeast D.C. run high above  
6 the national average.

7 AUDIENCE MEMBER: The what?

8 MR. ROTH: The infant mortality  
9 rates and the cancer rates run high above the  
10 national average in southeast D.C. And,  
11 obviously, there is a good chance that that  
12 has to do with the kind of environmental  
13 toxics that are in the atmosphere, in the  
14 environment.

15 So we wanted to find out where is  
16 this coming from, why is this -- you know,  
17 why is this happening. And through doing  
18 Freedom of Information Act requests, we were  
19 able to discover that the Navy Yard is  
20 actually one of -- as you have heard tonight,  
21 is one of the primary contributors of the  
22 PCBs into the Anacostia River.

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1 Right here in the Anacostia River,  
2 the -- as folks from the Sierra Club Legal  
3 Defense were pointing out, it is the hot spot  
4 for PCBs. You can see the spike there. That  
5 is not an accident. There is a real reason  
6 for that, and it has to do with the Navy  
7 Yard.

8 According to these EPA tests in the  
9 Navy Yard, we were able to find -- the EPA  
10 was able to find 227 parts per million of  
11 PCBs into a pipe that discharged directly  
12 into the Anacostia River. That's -- well,  
13 there is no allowable limit -- there is no  
14 allowable amount of PCBs that are able --  
15 that are allowed to get into the Anacostia  
16 River, according to the Clean Water Act.

17 227 parts per million is over 750  
18 times the amount of the allowable limit,  
19 okay?

20 And that was just streaming into  
21 the Anacostia River, every time it rained,  
22 into the river, okay?

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1           Now, remember, PCBs have been  
2 banned since 1976, so this stuff is -- it is  
3 not like they're, you know, producing PCBs  
4 and dumping them into the river now. They're  
5 in the soil. It is pervasive.

6           We're not saying the Navy now is  
7 pouring them into the river, but there is an  
8 active discharge. It is going into the  
9 river. And we want the Navy to take  
10 responsibility for it. It was once a  
11 mystery -- why are there PCBs in the river?  
12 We don't know. We don't know if they are  
13 coming from the sewers, it's a mystery.

14           Well, we have discovered actually,  
15 it is not a mystery, that the Navy has been  
16 for -- since PCBs have been around, has been  
17 a primary contributor to the problem. And as  
18 such, they should take responsibility for it.  
19 It is just A plus B -- one plus one equals  
20 two.

21           High PCBs -- PCBs are dangerous, a  
22 lot of health effects in the community, and

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1 here we find in the pipes of the Navy Yard  
2 and in the soil of the Navy Yard high amounts  
3 of PCBs, heavy metals, and other toxins.

4 What the Navy has done -- we  
5 actually met -- the Sierra Club Legal Defense  
6 Fund and Greenpeace met with the Navy -- with  
7 Navy officials last year. And they did  
8 acknowledge that the site was contaminated.  
9 They said it is extremely contaminated. And  
10 we asked them, well, what are you going to do  
11 about the river. We are concerned about the  
12 river.

13 What you have heard tonight is  
14 plans to clean up the site here -- and by the  
15 way, it is the site in which outflow No. 10,  
16 which is the pipe that has the 227 parts per  
17 million -- that's the area that they are  
18 going to be messing with. And that gives me  
19 a lot of concern for the people who work  
20 here. But it gives me also a lot of concern  
21 for the Anacostia River because I haven't  
22 heard what they are going to do about, you

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1 know, this saturated soil and how they are  
2 going to make sure it doesn't go into the  
3 Anacostia River even more than it has.

4 The Navy Yard is built on a lot of  
5 landfill. That means that if the water -- if  
6 the groundwater is polluted, it is going  
7 right into the Anacostia River. A lot of it  
8 is built in a flood plain, in which whenever  
9 there is a flood -- and we have seen a lot of  
10 floods recently -- any kind of chemicals that  
11 are on the Navy property wash into the  
12 Anacostia River.

13 MR. WALKER: If you would conclude,  
14 please.

15 MR. ROTH: Sure.

16 MR. WALKER: Thank you.

17 MR. ROTH: People are still fishing  
18 in the Anacostia River, and PCBs build up in  
19 fish, and they give very bad health effects  
20 to the people who consume the fish. I don't  
21 see the Navy Yard out there, you know,  
22 posting PCB warning signs, letting people

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1 know, hey, we are the direct cause of, you  
2 know, these problems here. There is no  
3 education efforts.

4 What there has been is a lot of  
5 what we call greenwashing, which is putting a  
6 nice, friendly face on a continuing lack of  
7 taking responsibility.

8 So what we would like to see the  
9 Navy do is to take responsibility, be a man,  
10 or a woman, and take responsibility for the  
11 contamination of the river. It is just very  
12 obvious, it is very black and white. We  
13 think it is the right thing to do. We feel  
14 we can really be proud of the military if  
15 they say, hey, you know, it is just obvious.  
16 You don't have to be a rocket scientist to do  
17 this.

18 Once they take responsibility for  
19 the pollution of the river, the next thing is  
20 to do something about it. And it is real  
21 important.

22 The Navy Yard had a walls to

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1 bridges program in which they distributed  
2 computers to local residents. Well,  
3 computers are great, but it is a little  
4 condescending. They didn't give computers to  
5 folks in Northwest. They said PCBs are bad,  
6 let's go and find a way to clean up the site.  
7 Well --

8 MR. WALKER: If you would conclude,  
9 please.

10 MR. ROTH: Sure.

11 Well, I feel that the Navy should  
12 be taking responsibility for cleaning up the  
13 Anacostia River, commit funds to it, and work  
14 with community and environmental  
15 organizations to help this river out and to  
16 really be straight with the local residents,  
17 you know, for all of our benefits, and to be  
18 real military heroes.

19 Thank you.

20 (Applause)

21 MR. WALKER: Wayne Turner. If you  
22 wouldn't mind, if you could turn that so

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1 you're speaking more towards here so that I  
2 can show you the card. Thank you.

3 MR. TURNER: Well, it is for  
4 everybody to hear.

5 MR. WALKER: Just a little bit,  
6 just a little bit. That's fine.

7 MR. TURNER: Thank you.

8 MR. WALKER: Thank you.

9 MR. TURNER: I'll keep an eye -- I  
10 am going to be pretty brief. My name is  
11 Wayne Turner. I'm an AIDS activist here in  
12 Washington, D.C. I live about 10 blocks  
13 away. I also want to mention my partner,  
14 Steve Michael, is running for the Ward 6  
15 council race, so put that in your craws.

16 But what we're talking about here  
17 is people's health. And in the world of  
18 AIDS, we have a very -- we have a very low  
19 trust level when it comes to government  
20 agencies telling us what is healthy for us  
21 and what is not.

22 You know, hearken -- if we all can,

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1     like, hearken back to July of this year when  
2     the Environmental Protection Agency  
3     discovered that our D.C. drinking water was  
4     contaminated with bacteria, and then the  
5     commissioner of public health here in D.C.,  
6     Dr. Harvey Sloane, said -- rescinded that  
7     boiled-water alert.

8             Now, this affects people with AIDS,  
9     people with cancer, elderly people, infants,  
10    people whose immune systems are weak. If  
11    they drink water that is contaminated with  
12    bacteria, they die. And we had our  
13    commissioner of public health rescinding that  
14    boiled-water alert because it was a tourist  
15    weekend. It was July 4th, a busy tourist  
16    weekend, and they didn't want to scare away  
17    the tourists.

18            So what we had to do in our group  
19    is issue our own boiled-water alert because  
20    the mayor was drinking D.C. tap water on TV,  
21    giving people the impression that it was safe  
22    to drink, when -- and then two weeks later,

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1 remember what happened? Chlorine was flooded  
2 into our drinking water because it was still  
3 contaminated.

4 And so, you know, I really want to  
5 thank the Sierra Club and our friends at  
6 Greenpeace for being very vigilant on this  
7 issue. And I think that we as a community  
8 have to maintain our vigilance and pressure  
9 our own local government to monitor the  
10 situation and work in coordination.

11 We had to go back in July, back  
12 through -- it was the D.C. Commission of  
13 Public Health working with the Army Corps of  
14 Engineers, working with the EPA, working with  
15 the Agriculture Department, working with our  
16 regional water authority, trying to figure  
17 out why do we have high levels of bacteria in  
18 our drinking water.

19 I think that we as a community  
20 can -- need to be able to mobilize so that  
21 our local government and our local government  
22 officials -- I don't see Dr. Sloane here.

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1 This is a health issue. This is a public  
2 health issue for us.

3 And the reason this is so  
4 important -- and when we talk about drinking  
5 water, back in 1992, in the city of  
6 Milwaukee, they had the same thing happen in  
7 Milwaukee as happened here. They had high  
8 levels of bacteria and something called  
9 cryptosporidium, which is a parasite which  
10 lives in water. And over 100 people died  
11 because government officials didn't do  
12 anything.

13 They didn't issue those boiled  
14 water alerts. They didn't come up with  
15 long-term solutions to make sure we have  
16 clean drinking water. And we lost 100 people  
17 with AIDS in that. We lost children. We  
18 lost our seniors. We lost people who were  
19 undergoing chemotherapy. We lost those  
20 people.

21 So we cannot keep repeating these  
22 same mistakes.

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(Applause)

MR. WALKER: Thank you. Denice Johnson.

MS. JOHNSON: My name is Denice Johnson. I'm a resident of Anacostia and also the owner of my own business called Denice Floral Design. I would like to share my concerns at this public hearing about the Navy Yard.

I am outraged that the Navy Yard has violated the Clean Water Act for years right here in our nation's capital. As a messenger of my community, Langston Lane, located in southeast Washington, we want you to stop destroying the Anacostia River.

It is incumbent upon the Navy Yard to take drastic measures to not only protect and preserve the river and its land, but to embrace the people. The Navy Yard must garner all of its resource to clean up the mess that they have made.

Don't you care about the lives that

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1 you adversely affect in our area? People are  
2 still fishing in the Anacostia River. They  
3 are also eating the contaminated fish that  
4 they catch. Many of them believe that if you  
5 fry the fish, then all of the pollutants will  
6 disappear. However, we know that this is not  
7 true.

8 No wonder residents east of the  
9 river have a high rate of health problems in  
10 the city. Carcinogens that you are dumping  
11 into the water are certainly contributing to  
12 the unhealthy conditions that people are  
13 exposed to, such as asthma and respiratory  
14 afflictions.

15 The problems of the Navy Yard as it  
16 relates to dumping contamination is wrong.  
17 So let's do something to solve the problem  
18 and not abandon possible solutions that could  
19 positively link the Navy Yard not only to a  
20 cleaner environment, but to the people of  
21 Anacostia.

22 I recommend the following.

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1 Employees at the Navy Yard should certainly  
2 play a role in the clean-up process so that  
3 they can be sensitized to its adverse effects  
4 in the community. Resources should also be  
5 allocated to community groups, churches, and  
6 schools to educate the public on the  
7 environmental issues surrounding the  
8 Anacostia River as it relates to the clean-up  
9 process and career opportunities.

10 (Applause)

11 MR. WALKER: Thank you.

12 Brenda Lee Richardson. And, again,  
13 if you'd state your name prior to speaking, I  
14 would appreciate it. Thank you.

15 MS. RICHARDSON: Okay.

16 My name is Brenda Lee Richardson,  
17 and I am a resident of Anacostia. I am also  
18 the president of Women Like Us, a company  
19 that focuses on the -- that focuses on  
20 welfare reform and environmental issues.

21 I'm really, really upset by what I  
22 have heard today. And I'd like to know why

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1 does the Navy Yard treat people like us in  
2 Anacostia with such insensitivity, indignity,  
3 and total disrespect for our precious  
4 environment. People like us --

5 (Applause)

6 MS. RICHARDSON: People like us  
7 have often wondered why the air and water  
8 quality east of the river is so poor.  
9 Perhaps it is because too often urban America  
10 is considered a vast wasteland to freely dump  
11 contaminants without retribution.

12 The Navy Yard has violated the  
13 people's trust in Southeast. You had no  
14 right to surreptitiously exhibit total  
15 disregard for humanity in this community.  
16 How dare you dump high levels of lead,  
17 arsenic, and PCBs into our river, the  
18 Anacostia River. This river belongs to the  
19 people who live here, and it is your  
20 responsibility to clean it up.

21 (Applause)

22 MS. RICHARDSON: Does it not

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1 matter -- does it not matter to you the harm  
2 that you have done to people like us? Think  
3 about it. What have you done to impair the  
4 health of our children, our mothers, those  
5 people who have HIV and AIDS, and especially  
6 our seniors?

7           You have committed a horrendous  
8 crime against citizens of integrity in  
9 Southeast, and you must be held accountable  
10 for your flagrant actions, not only by the  
11 courts, the EPA, the Sierra Club, but by the  
12 people. Serious measures must be taken to  
13 deal with this devastating injustice to our  
14 people, the river, the ecosystem, and our  
15 land.

16           Women Like Us recommends the  
17 following. The Sierra Club should be allowed  
18 to continue to represent the people and  
19 monitor the Navy Yard in the clean-up process  
20 because we know that they have a vested  
21 interest in our community.

22           The Navy Yard should meet monthly

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1 with the people in the community to report on  
2 the progress of the clean-up and educate the  
3 people on the adverse effects of what you  
4 have not only done to the river, but what you  
5 have done to us.

6 The Navy Yard should develop a  
7 community relations position and hire a  
8 resident from Anacostia to ensure that all  
9 pertinent information is shared accurately  
10 with the community and in a timely fashion.

11 I would hope that the Navy Yard  
12 would follow the vision of President Clinton  
13 to build bridges that would promote racial  
14 harmony as well as healthy and sustainable  
15 communities.

16 We implore you, the Navy Yard,  
17 don't be a vision killer and destroy this  
18 community's dream for a better quality of  
19 life. Instead, be a vision healer, and cross  
20 the bridge with us to a greener and cleaner  
21 land called Anacostia that will be preserved  
22 for all mankind.

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(Applause)

MR. WALKER: Thank you.

Karen Sholegate.

MS. SHOLEGATE: Hello. My name is Karen Sholegate, and I have been a resident of the District of Columbia for over seven years. Presently I live between Lincoln Park and Robert F. Kennedy Stadium in Ward 6.

I firmly believe that the people in the environment and in my neighborhood are being adversely affected by the United States Department of the Navy in its actions, or more correctly, lack thereof.

It is not necessary to possess a top secret security clearance to know the historical and environmental damage that the U.S. Navy has caused the District of Columbia. It is common knowledge that the Washington Navy Yard is toxically polluted and the United States Environmental Protection -- excuse me -- Protection Agency may soon list it as the District's very first

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1       superfund site.

2               Many Ward 6 residents are extremely  
3       concerned about a proposed development such  
4       as the Brian Circle Freeway and Children's  
5       Island. While these projects continue to  
6       threaten the harmony and well-being of the  
7       residents and the environment on the east  
8       side of D.C., they are still only proposals  
9       that may not yet come to fruition.

10              In reality, the U.S. Navy possesses  
11       an even greater danger to the health of  
12       eastside residents and their environment  
13       because they have exposed and continue to  
14       expose area residents to known toxic  
15       substances.

16              Only now, since plans are in motion  
17       to transfer some 4100 Navy personnel from  
18       their Naval Sea System Command headquarters  
19       in Crystal City, Arlington, Virginia, to this  
20       location in southeast Washington, D.C., has  
21       the U.S. Navy even considered any clean-up  
22       plans of this site.

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1 I understand that this relocation  
2 is being conducted in accordance with the  
3 Defense Base Closure and Realignment Act,  
4 P.L. 101-510, as implemented by the 1995 Base  
5 Realignment and Closure process.

6 As a sidebar, I totally support  
7 reduced defense spending and military base  
8 closures. But the health and safety of  
9 people should always be given priority over  
10 the BRAC process.

11 With all due respect, you can't  
12 have always -- with all due respect, you  
13 can't have it both ways. 4100 people,  
14 government workers, cannot be transferred to  
15 the site at the same time that EPA declares  
16 it a superfund site. Traditionally, people  
17 choose to live and work farther away from a  
18 superfund site, not directly on top of it.

19 I am pleased to be a resident of  
20 Ward 6, but the environmental threats, both  
21 current and proposed, to the Anacostia River,  
22 and to the people that live along it, are

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1 simply too much. Since moving to the east  
2 side of the District, I have acquired  
3 allergies that oftentimes require my absence  
4 from work and the necessity to seek the  
5 counsel of a medical doctor and prescription  
6 medicines.

7 Is it a coincidence that I am the  
8 only person at my place of employment that  
9 suffers from severe allergy symptoms and  
10 resides in Ward 6? I don't think so.

11 Therefore, if environmental  
12 conditions do not soon improve, I can see no  
13 other choice than to participate in the TTRM  
14 process, time to relocate myself. After all,  
15 I did not move to the District of Columbia  
16 from Buffalo, New York, the state of Love  
17 Canal, to live nearby another superfund site.

18 My questions are these: Have you  
19 notified every worker that is slated to be  
20 transferred from your Virginia location to  
21 the Washington Navy Yard about the health  
22 hazards they could experience as a result of

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1 exposure to your buried toxic substances?

2 Why hasn't the U.S. Navy taken any  
3 action before the transfer of its own  
4 personnel was proposed? Why does the U.S.  
5 Navy propose only a partial remediation of  
6 the site and not a total comprehensive  
7 clean-up?

8 In closing, I would like to say  
9 that your unwillingness to clean up your own  
10 environmental catastrophe is just one of many  
11 reasons why I am very disappointed in the  
12 U.S. Navy.

13 I should be proud to wear this  
14 sweatshirt, and even more proud of the fact  
15 that my late father, Richard E. Sholegate,  
16 yeoman second class, USN 2367641, served four  
17 years in the United States Navy. But I am  
18 sad to say that I am not.

19 The U.S. Navy dishonorably  
20 discharges known toxics into the Anacostia  
21 River, thus endangering the community that I  
22 live in. Your tall brick walls and \$15

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1 million sea wall aren't enough to protect us  
2 and the river from your polluting. You  
3 pollute, you refuse to stop, and apparently  
4 you don't care.

5 Maybe one day you can recycle one  
6 of your own recruiting slogans. Instead of  
7 full speed ahead, you can say full clean-up  
8 ahead.

9 Thank you very much for holding  
10 this public hearing on U.S. Navy personnel  
11 transfers. I appreciate your invitation to  
12 express my opinion as a community member  
13 directly affected by your nonactions. In  
14 addition, I request to be notified of any  
15 future public hearings and/or similar events.

16 Thank you and good evening.

17 (Applause)

18 MR. WALKER: Thank you.

19 Timothy Rose.

20 MR. ROSE: Good evening. My name  
21 is Timothy Rose, and I am a Ward 2 resident  
22 in the District of Columbia.

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1 I am here tonight to lend my voice  
2 in unison with other friends and neighbors in  
3 Washington requiring some answers as to how  
4 the U.S. Navy plans to cease and desist its  
5 vitriolic discharge of toxic pollutants into  
6 the Anacostia River, a continuous flow of  
7 lead, arsenic, mercury, and PCBs into one of  
8 only two rivers in this city.

9 Is that your idea of being a good  
10 neighbor?

11 In Dupont Circle, where I live, we  
12 insist -- no, we demand -- that our neighbors  
13 clean up their own mess in a timely fashion.  
14 And the people of the 6th Ward have every  
15 right to expect the same of you. And they  
16 have had to wait far too long already.

17 The process to declare the Navy's  
18 mess a superfund site could take up to a  
19 decade. The residents of the 6th Ward don't  
20 have that kind of time. Neither does anyone  
21 who cares about the future and health of our  
22 children in the District.

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1           We have all heard this inaugural  
2 week of the Navy's Commander in Chief's plans  
3 for Washington, D.C. Integral to them is the  
4 concept that all Washingtonians must work  
5 together on our problems. Navy personnel may  
6 be saying to themselves tonight, here is  
7 another left-wing environmentalist telling us  
8 what to do with our property in our own  
9 neighborhood, not his. It doesn't affect  
10 him, any more than it should concern me when  
11 Navy personnel come to Dupont Circle to visit  
12 our fine many gay bars and restaurants.

13           I guess I just told, without being  
14 asked.

15           (Laughter)

16           MR. ROSE: But the point is that  
17 the Commander-in-Chief, when it comes to all  
18 District residents working collectively to  
19 solve our problems, is absolutely right. To  
20 the residents of the 6th Ward, I say toxic  
21 pollutants that affect you affect me. And  
22 among the laundry list of all things that

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1 Washington should be outraged about -- and  
2 there are many -- is the fact that our  
3 neighbors are having to live with being  
4 dumped on by their own Navy every day.

5 It is a District, and truly a  
6 national, disgrace. When one looks at this  
7 long, dragged-out process to put an end to  
8 toxic pollutants flowing into the federal  
9 city's other river, how difficult it appears  
10 for the Navy and the agencies of the  
11 government who are supposed to be protecting  
12 us, one has to wonder, what are they  
13 thinking?

14 The answer, of course, is that they  
15 aren't thinking. And the time has come to  
16 start. The health and well-being of the  
17 District's children is what is at stake here.  
18 Get on the ball and clean up your mess now.

19 Thank you.

20 (Applause)

21 MR. WALKER: Thank you.

22 Christina Herman.

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1 MS. HERMAN: Thank you for the  
2 opportunity to speak. I'll keep this very  
3 brief because I don't think she'll sit still  
4 for long. But this is my main reason for  
5 being concerned about the PCBs and other  
6 toxins that are being released into the  
7 environment.

8 I'm concerned -- I'm a resident of  
9 Capitol Hill. I live just a few blocks away.  
10 And we're very concerned about both the toxic  
11 release into the river and the disturbance of  
12 this site and what will -- I'm not sure  
13 exactly what the plans are to control that.  
14 So that is one concern.

15 My other concern is the  
16 transportation issue. And you said you are  
17 going to limit that by limiting the parking  
18 spaces. But I would encourage you to --  
19 we -- this area is already saturated during  
20 rush hour. And I'm not sure how an extra  
21 influx of several thousand cars is going  
22 to -- is going to work with that.

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1 I am also concerned about the air  
2 borne pollutants with the increased  
3 transportation. So I would -- I can't  
4 improve on what other people have said  
5 earlier, and I heartily support their  
6 comments.

7 Thank you.

8 (Applause)

9 MR. WALKER: Thank you. It looks  
10 like Mustafa -- Mustafa -- if I am  
11 pronouncing that correctly.

12 (Pause)

13 MR. WALKER: Mustafa -- Mustafa?  
14 From the Anacostia Community Development  
15 Foundation?

16 (Pause)

17 MR. WALKER: I'll call that name  
18 later.

19 John -- Capozzi? I have a little  
20 trouble reading the handwriting here.

21 MR. CAPOZZI: Good evening. I am  
22 John Capozzi, resident of Barney Circle, here

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1 in Southeast, and wanted to come tonight.

2 The problem with the microphone -- I'm sorry,  
3 to turn your back on you, but it seems that  
4 the Navy Yard has really turned their back on  
5 us with these PCBs.

6 (Laughter)

7 MR. CAPOZZI: And I want to let  
8 them know tonight that I have a few concerns  
9 that I wanted to share.

10 I think, first of all, it is about  
11 community notification. I mean, we were  
12 happy to come tonight because you let us know  
13 about it. We'll be happy to come in the  
14 future to let you know about our concerns. I  
15 think it is clear that that has been  
16 something where we have been poorly informed.

17 Really, 20 years of inaction on  
18 these PCBs is something that people are not  
19 only concerned about, but you know, this is a  
20 community that is plagued with cancer. They  
21 call not only D.C. one of the highest cancer  
22 rates in the country, but this particular

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1 part of D.C. Cancer Alley, and that is for  
2 good reason.

3 Now I know this is something that  
4 is of concern to all of my neighbors and my  
5 community. And I know I can thank the Sierra  
6 Club Legal Defense Fund, not only for  
7 representing us tonight, but also on the  
8 Barney Circle Freeway project because we have  
9 tens of thousands of tons of hazardous waste,  
10 hazardous soil contaminated down there that  
11 was only found out because they led the fight  
12 to make sure that there was an environmental  
13 impact statement. So this process is really  
14 welcome.

15 I know it is also important to note  
16 that the Army was responsible for a lot of  
17 that waste, apparently. And so it is not  
18 unusual that the service is again ignoring  
19 our requests to take these actions very  
20 seriously.

21 Now I think one of this has to do  
22 with really the viewpoint that they expressed

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1 in their presentation tonight, because in my  
2 view of the community, when you offer 4100  
3 jobs to the Navy Yard to bring economic  
4 development here to Ward 6, we have to  
5 welcome that development.

6 But I think that in welcoming that  
7 development, we want to ask that people  
8 become actual residents of Ward 6 if they are  
9 going to work here in the Navy Yard because I  
10 think their viewpoint about this hazardous  
11 waste and PCB and this clean-up is going to  
12 change radically if most of those 4100 people  
13 lived right here in Ward 6 or in Anacostia  
14 and had to be affected by that every day.

15 I want to welcome the Navy to take  
16 a look at, for example, the Ellen Wilson  
17 Project, which is being redeveloped, which  
18 could provide homes for many of those people  
19 who would end up moving here and taking the  
20 jobs, and many other parts of the community  
21 that are looking for people to live in this  
22 community and work in this community, because

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1 that would change the entire viewpoint of how  
2 things will be affected in the future.

3 I think it is important that the  
4 Navy has used the river for 200 years, they  
5 now take the responsibility to clean it up so  
6 we can use the river for the next 200 years.  
7 And that is what I came to say tonight.

8 I'm hoping that the Navy will be a  
9 lot more concerned. I know that I will  
10 continue to be vigilant on this project  
11 because I have been an environmental activist  
12 for years. And I welcome you to have this  
13 hearing tonight, and I thank everybody from  
14 the community for coming.

15 Thank you.

16 (Applause)

17 MR. WALKER: Thank you.

18 Rene Carter.

19 MS. CARTER: I brought my daughter  
20 here because she wanted to -- she wanted to  
21 know one thing, was the water in her school  
22 drinkable? So I would like for someone to

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1 tell me is the water in my child's school  
2 drinkable because we don't know. We're here  
3 to find out.

4 We want our children and the school  
5 water tested. There is enough PCB going  
6 around. I'm sure there is lead in the water.  
7 We would like our children's water tested  
8 periodically while you are fixing up or  
9 putting more PCB in the water. We want our  
10 children tested.

11 You want to know why our children  
12 act out and why they act up? Maybe it is  
13 because of this PCB. I'm not sure, but we  
14 want to know. We want some answers. And to  
15 every meeting that you have, we will be here.  
16 And I will bring the whole PTA board the next  
17 time if you give me enough notice.

18 (Applause)

19 MR. WALKER: Thank you.

20 Sarah Thompson.

21 MS. HINES: Hi. My name is Sarah  
22 Thompson Hines. I am a resident of Ward 8

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1 and the founding director of Love thy  
2 Neighbor Community.

3 I was truly outraged when I  
4 discovered that the Navy Yard had been  
5 dumping arsenic, lead, and PCBs into the  
6 Anacostia River. The river is a precious  
7 resource to our community. What have you  
8 done to the children?

9 Most of the children of the  
10 District of Columbia reside east of the  
11 river. How many of them have you hurt?  
12 These children are our future. How many have  
13 them have you hurt?

14 We want them to be mentally and  
15 physically healthy. However, this is not  
16 possible if the Navy Yard continues to dump  
17 pollutants into the river, which will cause  
18 them to suffer with asthma, allergies, and  
19 other respiratory problems.

20 Therefore, here are my  
21 recommendations for restitution on behalf of  
22 the community and Ward 8 residents. Inasmuch

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1 as the Navy Yard has to clean up the  
2 Anacostia River anyway, I strongly suggest  
3 that residents from Southeast, including Ward  
4 8, be given first consideration for jobs with  
5 proper training, providing employment  
6 opportunities. This surely would be a great  
7 form of retribution. Also, the Navy Yard  
8 provide free water filters to residents to  
9 ensure that the quality of water we drink is  
10 clean.

11 In addition, I implore you to train  
12 our residents to test the water with water  
13 testers. And I personally work with NSA, so  
14 they do have little military water testers  
15 that you can use and send out to our  
16 communities, which would be another form of  
17 employment for our residents.

18 How can our children pursue the  
19 American journey President Clinton is talking  
20 about if government, the Navy Yard, is  
21 stopping us in our footsteps? I would hope  
22 that the Navy Yard will seriously consider

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1 forming public/private partnerships, not only  
2 with non-profits, but with community groups  
3 to help restore your image and to afford you  
4 an opportunity to become ambassadors of good  
5 will who have a vested interest in the  
6 people and the water that surrounds the walls  
7 of the Navy Yard.

8 Thank you.

9 (Applause)

10 MR. WALKER: Thank you.

11 Phillip Pannel.

12 MR. PANNEL: Good evening,  
13 everyone. My name is Phillip Pannel, and I  
14 am the executive director of the Anacostia  
15 Coordinating Council, which is in its 13th  
16 year as the consortium, the umbrella group,  
17 as it were, of individuals and organizations  
18 that are concerned with the revitalization of  
19 Anacostia. And we truly deal with every  
20 issue that affects the daily lives of those  
21 who work in Anacostia and live there, from A  
22 to Z, from A's to Zoning.

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1           And we're glad to say that at least  
2           some dialogue is starting to take place. Mr.  
3           Imparato will be at the Anacostia  
4           Coordinating Council's board meeting on next  
5           Tuesday at the Anacostia Professional  
6           Building at 2:00 p.m. And everyone is  
7           invited.

8           But what is so regrettable,  
9           particularly when it comes to military  
10          institutions -- not only here in the  
11          District, but throughout the nation -- is  
12          that they can be in communities but yet not  
13          be part of communities. And the Navy Yard  
14          basically remains isolated and detached from  
15          day-to-day community life.

16          The Navy Yard is basically nothing  
17          more than a sign on the Metro stop, and also  
18          a place where the people who live east of the  
19          river have to stand at that dangerous bus  
20          stop to get across the river.

21          We think, first of all, in terms of  
22          the ACC's position regarding your outreach,

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1 is that you have to be a bit more intense in  
2 terms of going to where the people are. As  
3 was so eloquently stated by my friend, the  
4 eco-feminist, our Brenda Lee Richardson, is  
5 that it would be -- it is imperative and  
6 paramount that you have meetings in the  
7 neighborhood east of the Anacostia River so  
8 they are more accessible to the people. And  
9 have some on weekends so that students can  
10 attend.

11 Also, we think that you have to be  
12 much clearer in terms of what are going to be  
13 the short term and the long term  
14 consequences, effects, repercussions, and  
15 benefits for the residents of the  
16 neighborhoods east of the Anacostia River  
17 because we have seen here, those of us who  
18 live in the District of Columbia, that  
19 whenever the government talks about these  
20 wonderful jobs that are coming in, they are  
21 usually going to people who live in the  
22 suburbs, Ward 9 and 10.

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(Laughter)

1  
2 MR. PANNEL: They are also -- of  
3 course, we -- one of the transcendent issues  
4 in terms of this entire relocation is the  
5 environmental one. The Anacostia River  
6 remains, unfortunately, to this day -- and  
7 this has been -- this has been absolutely  
8 shown by every study of every environmental  
9 and governmental group to be one of the most  
10 endangered urban waterways in the nation.

11 And the Navy Yard has had complete  
12 complicity with this continued pollution and  
13 endangerment of what used to be a wonderful  
14 environmental jewel in our nation's capital.  
15 And, therefore, we do want to talk about that  
16 in our neighborhoods.

17 And I know there are certain people  
18 who feel that the environmental movement is  
19 demographically monochromatic, but we do care  
20 about the air, the water, and everything  
21 else. We don't have to -- we are  
22 environmentally conscious east of the

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1     Anacostia River.

2             I would hope that you would listen  
3     to these other recommendations that were made  
4     tonight and establish that task force to have  
5     an ongoing type of relationship. I know that  
6     you have been having certain meetings with a  
7     few organizations east of Anacostia River. I  
8     think that needs to be intensified and needs  
9     to be more amplified so people know exactly  
10    what is going on.

11            And also, I think that you are  
12    going to have to look very creatively at  
13    certain types of approaches that really are  
14    going to affect the people east of the  
15    Anacostia River when it comes to the economic  
16    benefits because you can have a lot of people  
17    over here who are going to work, and yet they  
18    are not going to come across that river to  
19    have lunch.

20            So we are going to have to deal  
21    with possibly a conceptual thing such as  
22    having a water bus or a ferry across the

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1 river.

2 Let us all keep in mind exactly  
3 where the name Anacostia comes from. And it  
4 comes from the Anacostia, Native Americans,  
5 who were the first environmentalists in this  
6 community. And they truly knew exactly what  
7 being green meant, on both -- on both hands.

8 They were environmentally green  
9 because they kept the river clean. And they  
10 were economically green because they were  
11 Native American merchants, and they were able  
12 to basically go about their daily business  
13 and actually fuse the entrepreneurial with  
14 the environmental, and neither one suffered.  
15 But they were decimated.

16 But that dream does not necessarily  
17 have to be because we east of the Anacostia  
18 River will no longer sit back and continue to  
19 be left in the shadows of environmental and  
20 economic life. We are ready. Bring us to  
21 the table. We are ready to deal.

22 Thank you.

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(Applause)

MR. WALKER: Thank you.

Frazier Walton.

MR. WALTON: Good evening. My name is Frazier Walton, and I'm president of the Kingman Park Civic Association. The Kingman Park Civic Association is -- the Kingman Park area, I should say, is a community located out near RFK Stadium.

And we have been in a number of fights. We fought with Jack Kent Cooke and the proposed stadium. We fought, as the lady mentioned earlier tonight with Children's Island -- we're still fighting that project, so called Children's Island.

And first I just want to quickly thank -- and I'm not going to speak long either. But I want to quickly thank Damon Whitehead and Liz as well as Fern Shepherd, Liz Ferrara, for their efforts in representing us in the Sierra Club. We're one of the plaintiffs in this lawsuit.

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1           And this is a serious lawsuit, as  
2   you are aware. Our health is at stake. And  
3   Kingman Park just happens to be predominantly  
4   African American. But it goes -- it is much  
5   greater than that. This affects the entire  
6   region. As you know, the Anacostia dumps  
7   into the Potomac, which dumps into the  
8   Chesapeake Bay.

9           And I just wanted to give you a  
10   personal experience. There was a -- in  
11   Kingman Park, we have a boat mechanic who  
12   repaired a lot of the residents' boats, the  
13   boaters that go up and down the Anacostia  
14   River. And this particular boater, after  
15   sacrificing himself and going into the  
16   Anacostia River, taking off the propellers on  
17   the boats and repairing them, over the years  
18   became very ill. And he was taken to Prince  
19   George's County Hospital.

20           He was -- his boat shop was out  
21   here at Bladensburg, at the Bladensburg  
22   Marina. I'm sure many of you are familiar

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1 with that. And PG Hospital, they diagnosed  
2 him as having arsenic poisoning. And he  
3 became very despondent over that, and it was  
4 recommended that he see a psychiatrist, which  
5 he did.

6 And it was suggested that maybe his  
7 girlfriend, who he happened to live with,  
8 possibly had poisoned him, given him arsenic.  
9 So he became more despondent. And they  
10 suggested that he go for further tests. And  
11 they sent him to Laurel Hospital, down in  
12 Laurel, Maryland.

13 And at Laurel specialists  
14 determined that -- they began to question him  
15 about his employment. And they began to take  
16 samples from his fingernails because they  
17 said that was where the real concentration  
18 was setting, was under -- right under his  
19 fingernails.

20 And they diagnosed him as correctly  
21 having arsenic poisoning. But at Laurel  
22 Hospital, the specialists -- several

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1 specialists came from out of state. They  
2 said the poisoning was from the river.

3 This was four years ago. And at  
4 that time, they began to treat him. He is  
5 doing much better because they gave him a lot  
6 of antibiotics and various medications. But  
7 this boat mechanic, who sacrificed himself,  
8 was a white male.

9 So my point to you is that this is  
10 not only affecting the Afro-American  
11 community. And out in Kingman Park, we have  
12 the highest -- the highest rate of cancer in  
13 the city. And the city has one of the  
14 highest rates of cancer in the country.

15 And this is not just an opportunity  
16 to speak. This is a very serious issue. And  
17 we would ask -- we would certainly appeal to  
18 the Chief of Naval Operations to look at this  
19 seriously and commit funds to the clean-up of  
20 the Anacostia River.

21 And we would also ask the Chief of  
22 Naval Operations -- and the Navy, as you

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1 know, is a part of the Department of Defense.  
2 And the Defense should be our first line of  
3 defense in cleaning up this river. And Mayor  
4 Barry has announced that the residents of  
5 this city must pay 42 -- a 42 percent  
6 increase in their water bills to purify the  
7 water and clean up the river.

8 Now we would ask, on behalf of the  
9 Kingman Park Civic Association -- we are  
10 asking the United States Navy to maybe pay  
11 the difference of that 42 percent increase.  
12 That's the minimum start that you could take.

13 (Applause)

14 MR. WALTON: And we would really  
15 ask that you consider doing that because we,  
16 as residents of this community, are asked to  
17 take an unfair share of the burden of the  
18 damage that has been done by the Navy.

19 And in closing, we would just ask  
20 you, and sincerely ask you, to come out to  
21 our community to explain this because in our  
22 community, since this suit has begun, many,

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1 many of the residents -- and I know many of  
2 them are out here because I see them -- have  
3 had a run on the Safeway and Giant in buying  
4 spring water. They refuse to drink the  
5 water, including myself.

6 So I would just ask that you  
7 consider these proposals.

8 Thank you.

9 (Applause)

10 MR. WALKER: Thank you.

11 Reverend George Stallings.

12 REV. STALLINGS: Thank you very  
13 much.

14 Good evening. My name is George  
15 Stallings, Jr., and I am the archbishop and  
16 founder of Imani Temple on Capitol Hill,  
17 which is in Ward 6. And I am also a resident  
18 of Ward 6 in Anacostia. I have been living  
19 along the Anacostia River for the past 21  
20 years. And I can personally relate to what  
21 has been shared here tonight as a result of  
22 toxic materials and contaminants being dumped

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1 in the Anacostia River.

2 I am sure that from what has been  
3 said here tonight that the Navy Yard and the  
4 GSA will, as Spike Lee says, "do the right  
5 thing." I am convinced that you are aware of  
6 how serious we are about addressing this  
7 issue.

8 No one is going to stand in the way  
9 of progress. No one is going to deny  
10 progress. But when progress poses an  
11 imminent and substantial endangerment to the  
12 health of people, particularly children, and  
13 to the environment, we not only are going to  
14 be present in these meetings, but we are  
15 going to speak out, and we are not going to  
16 rest until you adequately address this  
17 concern.

18 This issue will be addressed by the  
19 Navy. I am sure of that.

20 (Applause)

21 REV. STALLINGS: I am confident  
22 that we will not have to have this kind of a

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1 community gathering again to let you know how  
2 serious this is. We want to -- you know,  
3 there is a commercial that says, like a good  
4 neighbor, State Farm is there. Like a good  
5 Navy, like a good neighbor, we know that the  
6 Navy Yard will be there.

7 The Navy Yard is not some elitist  
8 enclave unto itself that transcends the  
9 confines of law, that the Navy Yard has --  
10 the Navy Yard and GSA have obviously violated  
11 Sections 301 and 402 of the Clean Water Act,  
12 and that whenever any citizen, entity,  
13 corporation, or organization violates the  
14 law, then they are held to the highest  
15 standards of the law.

16 And there is no need for the Sierra  
17 Club to even have to go and file a suit on  
18 the behalf of plaintiffs who are from Barry  
19 Farms, who are from Anacostia. And because I  
20 live on the Anacostia and because I -- you  
21 know, I walk the Anacostia. I walk four  
22 miles along the Anacostia River every day. I

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1 walk my dog, my boxer, along the way.

2 And there is a difference between  
3 my boxer's eyes with the mucous type  
4 substance in the eye when he is with me and  
5 when he is with my sister in Forestville,  
6 Maryland. There is no mucous in the eye.  
7 So, obviously, I said, there must be -- it  
8 must be from the air in my house. But then I  
9 say, how does the air get into my house. It  
10 comes through from the outside.

11 And where does the air come from  
12 the outside? It sweeps across the river.  
13 And somehow there is something that is  
14 qualitatively different about the air that we  
15 even breathe here in Anacostia from the rest  
16 of this city or the rest of the surrounding  
17 jurisdiction.

18 So what we are saying very clearly  
19 is that we know that the Navy Yard and GSA  
20 are going to do the right thing. We are  
21 pleading with you, we are imploring you --  
22 imploring you to do the right thing.

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1           That is, we want to see progress  
2 here. We want to see you grow, but we are  
3 also concerned -- we are going to watch who  
4 you bring in here to hire because I agree  
5 with John Capozzi that if you are going to  
6 hire people, we want to set certain standards  
7 or regulations by which you hire a certain  
8 percentage of people from Ward 6, even from  
9 the city of Washington.

10           And so I just want to come here  
11 tonight to just plead with you to do the  
12 right thing. So, like Rodney King says,  
13 "Can't we all just get along." We want to  
14 get along. We want to be good neighbors. We  
15 want to see you progress. We want to see you  
16 grow. But we have got to do this together.

17           And we must always remember, when  
18 it comes to toxic materials, as well as  
19 contaminants, if it doesn't kill -- if it  
20 doesn't heal, rather -- if it doesn't heal,  
21 then it kills. If it doesn't heal, then it  
22 kills. And if toxic materials are continued

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1 to be dumped into the Anacostia River in a  
2 flagrant way, violating the law, we will  
3 pursue every legal action to stop you from  
4 doing it.

5 But we don't want to go there.  
6 Let's not go there. Let's do the right  
7 thing.

8 Thank you.

9 (Applause)

10 MR. WALKER: Thank you.

11 Dorothea Ferrell.

12 MS. FERRELL: Good evening,  
13 everyone.

14 I just want to speak on our youth  
15 of today and tomorrow. We are looking for a  
16 future for our young children to grow up to  
17 be adults. But as we carry our children to  
18 the Anacostia River during the summer, for  
19 picnics, for swimming, for skating, and other  
20 activities that different organizations have  
21 down there, the pollution from the Anacostia  
22 River is slowly killing them.

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1           We are all working together as  
2       parents, mothers, grandmothers, looking out  
3       for our children, grandchildren and great  
4       grandchildren, and trying to bring them up  
5       the right way. But we need the Navy Yard  
6       organization to help us to do this, to  
7       strengthen our future, our people, to keep  
8       them alive, not to kill them slowly.

9           We do have a lot of cancer in Ward  
10       8, not only adults, but we have it with now  
11       children. Take some of your organization to  
12       our hospitals, Southeast Community Hospital,  
13       Hadley Hospital, D.C. General Hospital, and  
14       find out how many people that we have there  
15       with an illness from Ward 6 and Ward 8. They  
16       have a lot.

17           And it's sad when you go to a  
18       nursery. I'm a licensed practical nurse, and  
19       it's sad to see our young people with the  
20       illness. Their heads are shaved clean  
21       because of the cancer that they have gotten  
22       through the water they are drinking when they

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1        come into this world. They bathe into this  
2        water.

3                Please do something. God said we  
4        ought to love one another, not to kill one  
5        another. Take that to heart tonight and  
6        pray, all of us, to make it a better world.

7                Thank you.

8                (Applause)

9                MR. WALKER: Thank you. Mustafa --  
10       Mustafa? Mustafa -- Mustafa, of the  
11       Anacostia Community Development Foundation?

12               (Pause)

13               MR. WALKER: Brent Blackwelder.

14               MR. BLACKWELDER: Good evening. My  
15       name is Brent Blackwelder. I'm president of  
16       Friends of the Earth, which is a national  
17       environmental organization. We're also  
18       international. We have member groups in 61  
19       countries.

20               I'm a resident here of Washington,  
21       D.C. I have lived here since 1948. And I  
22       want to say that I think the condition of the

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1       Anacostia River is serious, and it's a  
2       shame -- it's a shameful state of affairs.

3               I worked to help clean up some of  
4       the Potomac. And the tragedy that we face is  
5       that less than 1 percent of the money spent  
6       on cleaning up the Potomac has been spent on  
7       the Anacostia. It has been seriously abused.  
8       And the United States Navy, which is in  
9       charge of defending our lives and our health,  
10      has actually been -- from foreign threats and  
11      other forces -- has actually been guilty of  
12      putting toxic materials into the river, thus  
13      poisoning us at home.

14             This is contradictory to the basic  
15      mission that we see the Navy, and generally  
16      the Defense Department, ought to be carrying  
17      out. There is ample money in the Defense  
18      Department budget to do the clean-up. And  
19      that is what ought to be done.

20             This is not just a local issue.  
21      This is a matter where the nation's capital,  
22      which should be a model for the country, is

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1 not performing. We are being a terrible  
2 model. And the Navy ought to set an example  
3 by cleaning up this terrible toxic waste  
4 right here at home, and set an example.

5 Be a good steward. Defend our  
6 lives not only around the world, but here at  
7 home.

8 When I think back on my childhood  
9 and the chance to go fishing with my father,  
10 we didn't ask the question, well, we catch  
11 the fish but can we eat them or will they  
12 poison us. There are fish advisories on the  
13 Anacostia River. You should not be eating  
14 those fish. Yet people are fishing and  
15 eating them.

16 This is damaging their health, if  
17 you are a big fish consumer. What a tragedy  
18 to say to your children well, we can't go out  
19 and eat the fish there, they are filled with  
20 dangerous chemicals. We have got to stop  
21 this situation, and we can't stop it if the  
22 toxics continue to spill and leech into the

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1 river.

2 So there is an important element of  
3 responsibility here for the Navy. And I  
4 think the Navy has got to step up to the  
5 plate and perform. It's an essential duty.  
6 It's an opportunity also. Why take a hard  
7 line and not go ahead?

8 Seize the opportunity, clean up the  
9 river, set an example, be a good steward, be  
10 a member of the community, live in here,  
11 promote its health, don't poison it. That's  
12 the message that Friends of the Earth wants  
13 to offer. We're committed to trying to see  
14 that this clean-up occurs. And we hope you  
15 will move forward.

16 If you don't move forward, we are  
17 fully committed to use every political and  
18 legal force that we can find to bring about  
19 this clean-up. But please, take the  
20 initiative on your own and respond.

21 You have heard wonderful testimony  
22 tonight. I commend all of the citizens who

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1 have turned out from Ward 6 and from other  
2 parts of the city. And I commend all of you  
3 for doing that.

4 There is a real urgency that we can  
5 take this river, which has been so badly  
6 abused, and turn it around and make it a  
7 shining example of what can be done, of  
8 restoration, of restoring of our stewardship  
9 responsibilities.

10 And this, after all, is what all of  
11 our major religions are talking about:  
12 Caring for creation, feeling a sense of being  
13 a part of a great creation. And we could  
14 exercise that responsibility. I hope our  
15 military will do that.

16 (Applause)

17 MR. WALKER: Thank you. Once  
18 again, Mustafa -- Mustafa? Mustafa --  
19 Mustafa?

20 (Pause)

21 MR. WALKER: That is all of the  
22 cards that I have for individuals who asked

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1 to speak this evening. I would like to thank  
2 you all for your comments and concerns. We  
3 will be reviewing the transcript of this  
4 meeting, and we will be considering all of  
5 your comments and concerns as we begin the  
6 preparation of the final environmental impact  
7 statement.

8 AUDIENCE MEMBER: (Inaudible)

9 MR. WALKER: I'm sorry? Oh, I'm  
10 sorry. Your name, please?

11 MR. CROFT: My name is Howard  
12 Croft, and I will be brief because there has  
13 been extremely eloquent speeches heard here  
14 tonight. I live east of the Anacostia River.  
15 I have lived there for the last 15 years.

16 And I want to lend my voice to all  
17 of the other voices in this room. And I want  
18 to say that hopefully, in my lifetime, I will  
19 be able to fish in the Anacostia River, and  
20 I'll be able to eat those fish.

21 Hopefully, in my lifetime, the Navy  
22 will enter into a good neighbor policy with

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1 all of the residents of this city, and  
2 particularly with the residents east of the  
3 river.

4 I want to lend my voice to all of  
5 those who have suggested -- and I want to  
6 demand -- that you come to Anacostia, and  
7 that you have a meeting in the evening with  
8 the residents of Anacostia, and that you  
9 listen to us, and that you hear us talk about  
10 what we want you to do to begin to restore  
11 the Anacostia River and to make it the urban  
12 jewel -- make it the jewel that it once was,  
13 and the jewel that it has to be again,  
14 because for those of us who live in  
15 Anacostia, it is the Anacostia River. It is  
16 our namesake.

17 And again, I want to say that I  
18 challenge the Navy -- I challenge the Navy to  
19 take the lead, to not just stop polluting the  
20 Anacostia River, but to take the lead in  
21 doing the work to restore the Anacostia  
22 River.

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1                   So I thank you.

2                   (Applause)

3                   MR. WALKER: Thank you. Mr. Croft,  
4 to ensure the proper spelling of your name,  
5 did you have --

6                   MR. CROFT: It is C-r-o-f-t. And I  
7 am also a member of the Anacostia  
8 Coordinating Council. And I am also a board  
9 member for the Anacostia Economic Development  
10 Corporation.

11                  MR. WALKER: Okay.

12                  Did you have an opportunity to fill  
13 out a card?

14                  MR. CROFT: I did, yes.

15                  MR. WALKER: Thank you.

16                  MR. CROFT: Thank you.

17                  MR. WALKER: Were there any -- was  
18 there any other individual who would like to  
19 speak?

20                  (No audible response)

21                  MR. WALKER: Okay.

22                  Again, thank you for your comments

**BETA REPORTING**

**(202) 638-2400**

**1-800-522-2382**

**(703) 684-2382**

1 and concerns. We will gladly accept any  
2 written comments through February the 10th.  
3 The address where comments should be mailed  
4 is written on the comment card down at the  
5 sign-in table and shown on this slide.

6 A flyer containing this information  
7 is available on the tables at the rear of the  
8 room. Please take one if you haven't  
9 already.

10 If you would like to receive a copy  
11 of the draft EIS document, please add your  
12 name and address to the appropriate list at  
13 the back tables.

14 Finally, if you haven't had an  
15 opportunity to return your registration card,  
16 please do so on your way out.

17 Thank you again for coming, and  
18 good evening.

19 (Whereupon, at 8:45 p.m., the  
20 public hearing was adjourned.)

21 \* \* \* \* \*

22  
BETA REPORTING

(202) 638-2400

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## Public Hearing

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It is obvious from the comments received during the Public Hearing that the attendees misunderstood the purpose of the meeting. The Draft EIS discussed at the Public Hearing addresses the effects of construction related activities associated with the Base Realignment and Closure relocation of 4,100 Navy personnel from leased space in Arlington, Virginia to the Washington Navy Yard. The majority of the comments received at the Public Hearing concerned base-wide contamination and cleanup at the WNY and Anacostia River. While the EIS does address contamination and cleanup associated with project related components, base-wide contamination and cleanup are administered under the Installation Restoration Program, which is a separate process from this EIS and the BRAC action.

Due to the concerns raised during the comment period additional information on hazardous substances has been incorporated into the Final EIS. Decisions to be made concerning remediation of contamination at the WNY, however, have their own compliance procedures and requirements. Remediation associated with the BRAC relocation projects will be undertaken either as part of the construction process or the base Installation Restoration Program. In any case, remedial actions will be carried out, in accordance with applicable regulations and established procedures. These guidelines have been designed to protect human health and safety.

Many commentors at the public hearing provided similar comments in both oral and written form. The Navy's response to these comments follows the applicable written correspondence, which appears later in this section. The response above is provided to reply to the base-wide contamination concerns raised by most of the commentors.

**Public Hearing Comments-1: Ms. Lynn Sterrazza, Damon Whitehead (Sierra Club Legal Defense Fund).** See response to Sierra Club Legal Defense Fund comments later in this appendix.

**Public Hearing Comments-2: Mr. Robert Boone (Anacostia Watershed Society).** See response to Anacostia Watershed Society comments later in this appendix.

**Public Hearing Comments-3: Mr. James Connelly (Anacostia Watershed Society, Capital Rowing Club).** See response above

**Public Hearing Comments-4: Mr. Brad Roth (Greenpeace).** See response to Greenpeace comments later in this appendix.

**Public Hearing Comments-5: Mr. Wayne Turner (Steve Michael for Ward 6).** See response above

**Public Hearing Comments-6: Ms. Denise Johnson (Women Like Us).** See response to written comments later in this appendix.

**Public Hearing Comments-7: Ms. Brenda Lee Richardson (Women Like Us).** See response to Women Like Us comments later in this appendix.

**Public Hearing Comments-8: Ms. Karen Sholegate.** See response to Karen Szulgit later in this appendix.

**Public Hearing Comments-9: Mr. Timothy Rose.** See response to Timothy Rose later in this appendix.

**Public Hearing Comments-10: Ms. Christina Herman.** See response above. Local increases in traffic volume associated with the BRAC relocation would occur primarily during the morning and afternoon peak commuting period. The Navy will limit development of new parking spaces to be built under the proposed action in order to reduce employee parking related traffic. The anticipated impacts to local traffic are discussed in Section 4.1.8 of the EIS.

NAVSEA personnel currently work in Arlington Virginia and are already part of the Washington DC commuter traffic. The relocation would change the place of work for these employees, resulting in a shift of their commuting pattern. Little, if any increases in auto emissions are expected to result from this change and would be generated during brief periods of the morning and afternoon commuter periods.

**Public Hearing Comments-11: Mr. John Capozzi.** See response above. The NAVSEA relocation would change the workplace for Navy employees from leased space in Arlington, Virginia to the WNY, a distance of about five miles. The majority of these employees are not expected to change their place of residence because of this relocation. An employee's place of residence is a personal choice and not part of the decisions to be made in this EIS.

**Public Hearing Comments-12: Ms. Rene Carter.** Drinking water for all Washington, DC residents comes from a regulated treatment facility. This facility tests and treats water in conformance with established water quality standards. Lead in drinking water is usually associated with pipes that carry the water. The relocation of Navy personnel to facilities developed at the WNY would not affect drinking water for city residents. Suggest you contact school officials and/or the City Public Works Department concerning the purity of school and residential drinking water.



**Public Hearing Comments-13: Ms. Sarah Hines (Love Thy Neighbor).** See response to Love Thy Neighbor later in this appendix.

**Public Hearing Comments-14: Mr. Phillip Pannel (Anacostia Coordinating Council).** See response above. The decisions to be made through this EIS deal with a small group of buildings within the western area of the base, and are designed to provide the necessary facilities to accommodate the relocation of Navy personnel to the WNY. While the relocation is expected to provide some service related opportunities, issues associated with base-wide community relations and employment should be directed to the Public Affairs Office at 433-2218.

**Public Hearing Comments-15: Mr. Frazier Walton (Kingman Park Civic Association).** See response above and the Sierra Club Legal Defense Fund response later in this appendix.

**Public Hearing Comments-16: Rev. George Stallings (Imani Temple).** See response above.

**Public Hearing Comments-17: Ms. Dorothea Ferrell.** See response above. Drinking water for all Washington DC residents comes from a regulated treatment facility. This facility tests and treats water in conformance with established water quality standards. Lead in drinking water is usually associated with pipes that carry the water. The relocation of Navy personnel to facilities developed at the WNY would not affect drinking water for city residents. Suggest you contact school officials and/or the City Public Works Department concerning the purity of school and residential drinking water.

**Public Hearing Comments-18: Mr. Brent Blackwelder (Friends of the Earth).** See response above.

**Public Hearing Comments-19: Mr. Howard Croft (Anacostia Coordinating Council, Anacostia Economic Development Corporation).** See response above.

# THE COMMISSION OF FINE ARTS

ESTABLISHED BY CONGRESS 17 MAY 1910

THE PENSION BUILDING  
141 F STREET, N.W., SUITE 312  
WASHINGTON, D.C. 20001-2778

202-504-2700  
202-504-2195 FAX

3 January 1997

Dear Mr. Riek:

The staff is in receipt of the Draft Environmental Impact Statement for the 1995 Base Realignment and Closure Action pertaining to the Naval Sea Systems Command at the Washington Navy Yard. Noting our historic and continued interest in the Navy Yard, we would like to commend the Chesapeake Division for its thorough analysis.

There were two minor points that are worth bringing to your attention. In your List of Agencies and Persons Consulted (Section 6.0), you fail to mention the Commission of Fine Arts. No doubt there is a reasonable explanation for the omission. The second point concerns Appendix B, your Traffic Management Plan Update. In providing such detailed information on the number of parking spaces available, it might be helpful to include a more current "update" with respect to Parking Structure II on Parsons Avenue, approved by this Commission in March 1995 but not made part of your analysis.

We look forward to working with you on this and related design and planning issues at the Navy Yard.

Sincerely,



Charles H. Atherton  
Secretary

Mr. Hank Riek, Code 20E  
Engineering Field Activity-Chesapeake  
Naval Facilities Engineering Command  
901 M Street, S.W. Building 212  
Washington Navy Yard  
Washington, D.C. 20373-5018

c. Mr. Lawrence Earle

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## **The Commission of Fine Arts**

Charles H Atherton, Secretary  
The Pension Building  
441 F Street, NW Suite 312  
Washington, D.C. 20001-2728

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### **Response to Comments as numbered on the preceding correspondence:**

1. The Commission of Fine Arts has been added to the list of Agencies and Persons consulted in Section 6.0 of the Final EIS.
2. A Traffic Management Plan (TMP) for the Washington Navy Yard was prepared in conjunction with the assessment of environmental affects associated with the 1993 BRAC relocation of Navy personnel to the WNY, and included the development of Parking Structure II on Parsons Avenue. The TMP prepared for the BRAC 1993 action was updated for the BRAC 1995 relocation actions. This updated version addresses both the Parsons Avenue and Isaac Hull Avenue Parking garages.

## NATIONAL CAPITAL PLANNING COMMISSION

### COMMISSION MEMBERS

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Honorable Marion S. Barry, Jr.

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District of Columbia  
Honorable David A. Clarke

EXECUTIVE DIRECTOR  
Reginald W. Griffith

IN REPLY REFER TO:  
NCPC File No. 5534

FEB 11 1997

Mr. Hank Riek, Code 20E  
Engineering Field Activity Chesapeake  
Naval Facilities Engineering Command  
Building 212, Washington Navy Yard  
Washington, DC 20374-5018

Dear Mr. Riek:

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Naval Sea Systems Command, Washington Navy Yard (WNY), Washington, D.C. At its February 6, 1997 meeting, the Commission approved comments for the Department of the Navy's consideration in preparation of the final document.

The Commission commends the Navy for its early and continued consultation with the Commission and others regarding treatment of its historic buildings and site. Specifically, we note your consultations with relevant review agencies leading to a Memorandum of Agreement (MOA) to complete the requirements of Section 106 of the National Historic Preservation Act. The MOA acknowledges and responds to the adverse effects of the proposed demolitions of Buildings 28, 142, 198, and 201, as well as the adaptive use of Building 104. We understand that the consulting parties are satisfied with the Navy's study of alternatives for accommodating its increased parking demand even though constructing a garage where Buildings 28 and 143 are currently located would require demolition of the two buildings. We also commend the Navy for its commitment to conform with the Comprehensive Plan employee parking standard of 1:3.

Also, the proposal conforms with several goals and policies of the Comprehensive Plan for the National Capital. The proposed relocation can help reestablish the historic relative distribution of approximately 60 percent of the total regional Federal employment in the District of Columbia. Furthermore, the consolidation of a substantial number of personnel at one location can improve operational efficiency and economy. Consolidating Federal employees in existing Federal facilities would help the government to improve operational efficiency, reduce costs, and promote adaptive use of buildings. Finally, the proposed relocation supports a Commission policy of deploying Federal employment near Metrorail stations, which helps the region attain transportation and air quality goals.

Mr. Hank Riek  
Page Two

Nevertheless, we have identified a few environmental issues for your consideration as you prepare the Final EIS. Although the DEIS includes a discussion of Navy's plans to minimize possible flood hazard impacts, the Final EIS should note if special floodproofing materials will be incorporated into building designs. The document should explain why only annual air quality rates, rather than hourly and daily rates, were assessed. It should also indicate the portion of noise attributable to the proposed action and that related to background noise. Importantly, we urge you to complete your assessment of potential contamination on the site so that possible impacts and mitigation measures can be noted in the Final EIS. Furthermore, we suggest the Navy coordinate remediation efforts with community and environmental groups, as well as with pertinent Federal agencies.

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In addition, we request that the Navy address several transportation issues. Planned vehicular and pedestrian circulation systems should be assessed for their potential impacts on the project area, the rest of WNY, and the area outside WNY. We encourage the Navy to coordinate pedestrian access and circulation plans with the General Services Administration, which has jurisdiction over the adjacent Southeast Federal Center, to ensure that the waterfront lands are treated compatibly and designed to accommodate public accessibility. We also urge the Navy to consult with nearby residents and the District government regarding enhancement of the area. The potential for queues as drivers enter and exit the installation and the proposed parking garage should be examined. The Fire Department has raised questions about the adequacy of emergency vehicle access with other projects at the Navy Yard. We urge you to evaluate the adequacy of emergency vehicle access and circulation based on street widths and turning radii in coordination with the District of Columbia Fire Department. Finally, the Navy should assess potential truck traffic impacts as they relate to circulation and anticipated frequency of truck trips.

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We appreciate your consideration of our comments and recommendations, which the enclosed Executive Director's Recommendation discusses in greater detail. Please let us know if we can be of further assistance during the environmental documentation process.

Sincerely,



Reginald W. Griffith  
Executive Director

Enclosure

1-30-97

**NATIONAL CAPITAL PLANNING COMMISSION**  
801 PENNSYLVANIA AVENUE, N.W., SUITE 301  
WASHINGTON, D.C. 20576

NCPC File No. 5534

**NAVAL SEA SYSTEMS COMMAND HEADQUARTERS  
WASHINGTON NAVY YARD, WASHINGTON, D.C. -  
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**Executive Director's Recommendation**

January 30, 1997

The Executive Director recommends that the Commission authorize transmittal of the attached letter to the Department of the Navy (DON) on the Draft Environmental Impact Statement (DEIS) for the Naval Sea Systems Command Headquarters (NAVSEA), Washington Navy Yard, Washington, D.C.

\*       \*       \*

**BACKGROUND AND STAFF EVALUATION**

**DESCRIPTION OF PROPOSAL**

The Department of the Navy, pursuant to the National Environmental Policy Act (NEPA), as amended, has prepared a DEIS that evaluates the potential impacts of the proposed development of the western portion of the Washington Navy Yard (WNY) for the NAVSEA Headquarters. DON proposes to re-locate the NAVSEA Headquarters from Crystal City in Arlington, Virginia, to the WNY as mandated by the 1995 Base Realignment and Closure Commission Recommendations (known as BRAC 95), in accordance with the Base Closure and Realignment Act of 1990. Under the timetable imposed by BRAC 95, construction is expected to begin in 1997 for occupancy in 2001.

The project involves renovation, demolition, and new construction of several buildings in the western part of WNY, and associated site improvements including a waterfront park to replace surface parking. The project area is bounded by M Street on the north, the Anacostia River on the south, Patterson Avenue on the east, and the Southeast Federal Center on the west. The project area is divided by Isaac Hull Avenue, running north-south from M Street to the waterfront, and by Tingey Street, which runs east-west and connects to the Southeast Federal Center. Three Metrorail stations are located approximately a 15-minute walk from WNY: Navy Yard to the west, Eastern Market to the north, and Potomac Avenue to the northeast. Metrobus service is provided along M Street.

The Navy examined four build alternatives. All of the alternatives essentially incorporate the same group of buildings, but vary by degree of renovation, demolition, and new construction.

**Alternative 1** - This is the Navy's preferred alternative. It would involve the renovation of three buildings, demolition of five buildings, and construction of three new structures, including an eight-level parking garage.

**Alternative 2** - This alternative would be limited to the renovation of six existing buildings and the construction of a 12-level parking garage within an existing parking area.

**Alternative 3** - This alternative would result in the demolition of a large block of six adjacent buildings and construction of one new office structure in their place. Two additional buildings would be renovated for office space and a large structure would be converted into a seven-level parking garage.

**Alternative 4** - In this alternative, the same large block of six buildings would be demolished and replaced with a new office structure. One large structure would undergo renovation and enlargement by addition. This alternative differs from Alternative 3 because parking would be incorporated in the two lower levels of these structures.

Although the project will be constructed in a single phase, the design concepts are being submitted to the Commission in two phases, due to the scheduling of design work. The first phase was presented to the Commission on October 3, 1996, and included: renovation of Building 197 and construction of an extension to the east, to be named Building 197E; demolition of Buildings 28 and 143; construction of a parking garage at the location of these demolished buildings; and site improvements extending north of M Street and including the western half of the waterfront park.

The second phase of the design concepts, presented to the Commission on January 9, 1997, included: renovation of Building 104, involving alteration of the exterior roof profile and conversion from industrial to office use; demolition of Buildings 142, 198, and 201; construction of a new Building 201 at the location of these demolished buildings; replacement of two small guardhouses along Isaac Hull Avenue, one near M Street and one at the border with the Southeast Federal Center on Tingey Street; and site improvements around the buildings and including the eastern half of the waterfront park.

The floor area for Buildings 197 and 197E will total 63,500 gross square meters (gsm) (684,000 square feet). The parking structure will contain 8 levels (7 above-grade, 1 below-grade) with space for 1,500 cars, which will be partially offset by the elimination of surface parking along the waterfront. Building 104 will consist of 12,000 gsm (130,000 square feet), and Building 201 will contain 17,000 gsm (183,000 square feet). Building 104 will also contain 40 interior parking spaces and 10 curbside spaces will be provided along the south face of Building 201.

The site design includes a one-way loop road through the NAVSEA complex: southbound along Isaac Hull Avenue (with entrance to the parking garage and Building 104 parking); eastbound on Sicard Street, which will run between Building 201 and the waterfront; and northbound on Patterson Avenue (which receives cars exiting from parking); then rejoining Isaac Hull Avenue at the M Street entrance. Service access will be provided from this loop road to Building 197 and the waterfront. Other site elements include landscaping along streets, in the waterfront park, and in the "pocket" park north of Building 201, all of which are in keeping with the concepts of the first phase. The design of two guardhouses is also included, one containing a bathroom.

The project will greatly increase the employee population at WNY. The current population (as of 1995) is approximately 5,400, which is slightly below the typical level of recent decades. Employment shifts resulting from BRAC 93, whose implementation will be completed in the next few years, will bring a net gain of 1,000 employees to WNY, for a total of 6,400. Implementation of BRAC 95, consisting of the NAVSEA project, will bring an additional 4,100 employees. Minor future changes are expected to add 300 more jobs, bringing the total employment at WNY to 10,800.

#### *PREVIOUS COMMISSION ACTION*

The Commission has heard three information presentations on this project. The first presentation was given at its February 1, 1996. Comments from individual Commissioners focused on the proposed improvements to the waterfront area, including the proposed relocation of the outdoor amphitheater.

At its meeting of October 3, 1996, the Commission was given an information presentation on the first phase of design concepts for the NAVSEA relocation. Staff presented its comments to the Commission, and subsequently sent those comments to DON. The Commission did not take formal action because environmental documentation had not been completed.

At its meeting of January 9, 1997, the Commission was given an information presentation on the second phase of the design concepts. The second phase included renovation of Building 104, demolition of Buildings 142, 198, and 201, construction of a new Building 201 at the location of these demolished buildings, replacement of two small guardhouses along Isaac Hull Avenue, and site improvements around the buildings in addition to the eastern half of the waterfront park. The Commission transmitted staff comments in a letter dated January 17, 1997. The letter noted that staff was pleased with the development of the design at that stage. In the letter, staff also reiterated the broad objectives that should be considered during future development of the design.

#### *CONFORMANCE WITH COMPREHENSIVE PLAN*

Several policies contained in the Federal elements of the Comprehensive Plan for the National Capital apply to the proposed build alternatives in the Draft EIS. The relocation of 4,100 Navy personnel



from Northern Virginia to WNY in the District of Columbia represents the transfer of a significant number of Federal employees from one jurisdiction to another in the National Capital Region. An applicable policy in the Federal Employment element states:

The historic relative distribution of Federal employment of approximately 60 percent in the District of Columbia, the established seat of national government, and 40 percent elsewhere in the Region should continue during the next two decades.

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The consolidation of a substantial number of military personnel at one location can improve operational efficiency and economy. The applicable policy in the Federal Employment element specifies:

Agencies or activities with common or complementary functions should be consolidated in common or adjacent space to improve administration, employee management and productivity.

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Locating Federal employees in existing Federal facilities is also an important consideration in the Federal Employment element. An applicable policy in this element reads:

Priority should be given to locating Federal employees in existing Federal Facilities in the Region, consistent with Federal Agency requirements.

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The Comprehensive Plan encourages the deployment of Federal employment near Metrorail stations. A policy in the Federal Employment element specifies:

In the deployment of Federal employees, special consideration should be given to employment areas in close proximity to Metrorail stations.

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The relocation of a large number of Federal employees from one jurisdiction to another may cause adverse economic impacts. It should be noted, however, that an economic impact assessment is required only for receiving sites. An applicable policy in the Federal Employment element states:

Major new locations or relocations of Federal employment that will occupy 100,000 square feet or more of building space in the region should be planned and programmed (timed), to the maximum extent practicable, to minimize adverse economic impacts on affected local jurisdictions.

21

All of the proposed build alternatives would result in adaptive reuse and demolition of historic properties in the WNY. Applicable policies in the Preservation and Historic Features element specify:

New construction on Historic Landmarks or in Historic Districts should be compatible with the historical architectural character and cultural heritage of the landmark or district. In design, height, proportion, mass, configuration, building materials, texture, color and location, new construction should complement these valuable features of the landmark or district, particularly features in the immediate vicinity to which the construction will be visually related.

22

Demolitions of buildings or structures that contribute to Historic Properties should be permitted only when denial of such permission would result in unreasonable economic hardship to the owner, or when demolition is necessary to permit construction of a project of special merit. In instances where a project has been determined to be of special merit, if it is demonstrated that the replacement project will be initiated immediately and can be completed, demolition will be permitted to proceed.

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As site excavation to accommodate new construction would be involved, an additional policy in this element applies:

Archeological resources should be retained intact, where feasible. If preservation in place is not feasible or data anticipated to be recovered is judged to be of such significance that excavation is justified, the area of destruction, alteration or disturbance of a recognized archeological resource should be minimized and findings should be documented.

24

As most of the project site for the proposed build alternatives is located within the 100-year floodplain, a policy in the Environment element relating to floodplain protection is applicable. This policy states:

Where no alternative to development in the Floodplain exists, proposed development and new uses should be carefully regulated to insure the harmonious use of Floodplains by minimizing flood hazards and preserving natural values.

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The Comprehensive Plan employee parking standard applicable to the WNY would permit up to a maximum of one parking space per three employees. The applicable policy in the Federal Facilities element specifies:

In the District of Columbia, Arlington County, the City of Alexandria and the Silver Spring area of Montgomery County between the Prince George's County line and 16th Street Extended, south of the Beltway, one space per three employees (1:3).

26

The Transportation Management Plan (TMP) contained in the draft EIS indicates that 3,717 parking spaces would be designated for 10,800 employees to be accommodated at WNY, which would be in essential compliance with the Comprehensive Plan employee parking standard of 1:3. The proposals in the TMP, however, should be vigorously applied to assure compliance with the parking standard. The existing employee parking ratio at WNY is approximately 1:2.

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### **HISTORIC PRESERVATION**

The Navy has completed a Memorandum of Agreement in consultation with other agencies, thus completing its responsibilities under Section 106 of the National Historic Preservation Act. As part of that effort--and to be used in tandem with the Draft EIS--the Navy also completed a Cultural Resource Assessment of Effect, documenting and evaluating historic structures at the Navy Yard. A new overview history of the Washington Navy Yard was written to update the 1976 National Historic Landmark nomination. The research included a new survey and field investigation, as well as study of primary documents. The majority of the buildings within the Area of Potential Effect are considered contributing resources in the existing historic district (this evaluation did not occur in the 1976 documentary work). The survey forms provide the Navy (and others, including Commission staff) with specific information about each building.

Archaeological research included a review of archival resources and field inspection. The Area of Potential Effect consists of landfill deposited since the establishment of the Navy Yard, and the resources are expected to consist of building foundations, utilities, other infrastructure, refuse, and the like. While acknowledging the physical constraints at the site, the assessment recommends that future archaeological investigation address the early shipbuilding period of the Navy Yard (1800-1840), since there are no extant buildings of that era.

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### **ENVIRONMENTAL IMPACT**

*Topography and Soils.* Slopes will not constrain development since the site is relatively flat. The site slopes gently southwest towards the Anacostia River. Most of the site consists of Urban Land which includes asphalt, concrete, buildings, or other impervious surfaces. The primary concern about such land is stormwater runoff.

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*Hydrology.* WNY is located along the tidal portion of the Anacostia River, upstream of its confluence with the Potomac River. No streams or wetlands exist at the site. Most of the project site is located within the 100-year floodplain of the Anacostia River. The Navy will implement several methods to guard against potential flooding. Possible actions include elevating critical equipment, floor levels, and raising doorways above the 100-year floodplain. If floodproofing will be incorporated into building designs, then the EIS should incorporate such information.

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Stormwater inlets collect surface runoff. WNY is working with the Environmental Protection Agency (EPA) to obtain a permit for the discharge of collected stormwater into the Anacostia River and to prepare a stormwater management plan for the entire installation. For the project site, the Navy plans to convert the impervious asphalt surface parking area near the waterfront, to a small vegetated urban park. This land use conversion will help filter some sediments as stormwater runoff flows towards the Anacostia River.

*Flora and Fauna.* No Federally listed threatened or endangered vegetation or wildlife inhabit the site. The landscape is mostly comprised of grass. The one-acre Willard Park is the second largest vegetated area at WNY and contains trees, shrubs, and flowering annuals. Conversion of the waterfront parking area to an urban park will increase green space at the installation.

*Energy.* Existing and planned utility systems will adequately serve the energy needs of the proposed development. The addition of substations and distribution lines for electrical and telephone support will be required. A chiller plant will be installed in Building 116 to provide air conditioning to serve NAVSEA buildings.

The Navy should identify energy conservation measures that are based on building design or landscaping, including energy efficient building materials and fenestration. Landscaping elements that could affect energy requirements include the types and locations of plantings. For instance, a combination of bushes and trees could reduce cooling costs by blocking heat (bushes) reflected from streets or shielding buildings (trees) from sunlight.

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*Air and Noise Quality.* No major emission generators are located within the project site. The proposed action is not expected to exceed the permitted operating capacity of the heating plant. Annual rates of emissions from construction and operation of the NAVSEA project (including estimated new traffic trips) activities air quality conform with regulations established by EPA. Although the DEIS notes that the proposed action will not violate annual air quality standards, it does not discuss the potential impact on hourly or daily air quality. The document should explain why only annual rates, rather than hourly and daily rates, were assessed.

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Construction activities and increased traffic levels during the morning and evening peak periods will slightly increase noise levels. Noise from construction will be temporary. Projected noise levels are not expected to exceed the Navy's eight hour threshold criteria. Immediately adjacent to M Street, noise levels are expected to approach or exceed the Federal Highway Administration noise standard during peak morning and evening commuting periods. Such noise levels, however, would occur intermittently and would not affect the residences north of M Street. For the Final EIS, staff requests that the Navy distinguish between noise attributed to the proposed action and that caused by background noise (levels generated by sources other than the proposed action, but including anticipated growth).

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**Wastes.** Although WNY is not a source or generator of large amounts of hazardous materials or wastes, past industrial activities have raised concerns about potential for contamination from hazardous materials at the installation. Therefore, WNY conducted a Preliminary Assessment (PA) of potential contamination. The PA identified three areas (Buildings 73, 116, and 197) of concern within the project boundaries. No contaminants are expected to present a danger to personnel within the buildings. Construction workers, however, could be exposed to higher concentrations of contaminants through physical contact with soils or groundwater during subsurface excavation. Staff urges the Navy to complete its assessment of potential contamination so that possible impacts can be noted in the Final EIS and the Navy can include appropriate mitigation measures, if necessary, in the EIS. Assessment and mitigation of hazardous materials and wastes will be critical based on past industrial uses, citizens' and groups' concerns about cleanup efforts, and, as publicly announced by the Environmental Protection Agency after the printing of the DEIS, the potential for the the Navy Yard to be listed as a Superfund site.

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**Transportation.** Immediate and principal access to WNY is available from signalized intersections at M and 9th Street/Parsons Avenue (main entrance gate) and the 11th Street and N Street access gate. Secondary access is provided at the Isaac Hull Avenue and Tingey Street gate, which provides direct access to and from the Southeast Federal Center. The signalized intersection of M Street and Isaac Hull Avenue provides egress from WNY from 3:15 PM to 4:30 PM daily and is closed at all other times. The Navy Yard Metrorail Station is located approximately 10 minutes from the nearest gate of the Navy Yard at Isaac Hull Avenue. The Eastern Market Metrorail could also serve the site.

Currently, only two intersections in the study area do not operate at acceptable levels-of-service (LOS). Peak AM traffic at M and 7th Streets operates at LOS E and peak AM and PM traffic at South Capitol and M Streets operates at LOS F. These two intersections are projected to operate at LOS F in 2001.

The proposed one-way loop road system for vehicular circulation, in conjunction with two-way traffic on Tingey Street and "pocket" parks, should improve traffic flow in this portion of WNY. The one-way loop would simplify traffic circulation and possibly reduce potential traffic conflicts (vehicular and pedestrian). The "pocket" parks would enhance visual experiences and improve Pedestrian safety by separating pedestrian and vehicular traffic. Staff encourages the Navy to coordinate pedestrian access efforts with the General Services Administration, which has jurisdiction of the adjacent Southeast Federal Center, to ensure compatible treatment of the waterfront lands and to make them accessible to the public.

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Although the loop could simplify traffic conditions, DON needs to address several transportation issues. The provision of two ingress and two egress points along the east and west sides of the parking deck, respectively, could reduce potential queues in and around this structure. Staff recommends that the Final EIS assess the potential for queues and suggest mitigation measures, if

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necessary. The September, 1996 Project Report states that streets and "pocket" parks will accommodate emergency vehicles. Additional explanation should be provided, supported by street widths and radii and confirmation by the District of Columbia Fire Department. DON should also explain how it will handle truck traffic, parking, and loading.

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#### **RECOMMENDATION**

Staff recommends the Commission approve the transmittal of comments contained in the attached letter.

## **National Capital Planning Commission**

Reginald Griffith, Executive Director  
801 Pennsylvania Ave., Suite 301  
Washington, D.C. 20576

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### **Response to Comments as numbered on the preceding correspondence:**

1. Comment noted. Thank you.
2. Comment noted. Thank you.
3. Comment noted. Thank you.
4. Comment noted. Thank you.
5. Comment noted. Thank you.
6. As stated in the Draft EIS the project site is located within a FEMA designated 100 year flood zone. Existing structures associated with the project site have been constructed with masonry and/or concrete materials. Any new construction would use similar floodproof materials, as well as, design features to reduce the effects of flooding.
7. Under the authority of the Clean Air Act (CAA) the Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for six specific or criteria pollutants, that it determined were critical to the health and welfare of all Americans. Through monitoring and sampling the EPA identified specific areas of Non-Attainment of these standards, the degree to which the standards were exceeded and set specific deadlines for local regulators to achieve these standards. The District is located within an area designated as a serious non-attainment for ozone with an attainment date of November 15, 1999. The states were required to develop a State Implementation Plan which identified specific efforts to achieve NAAQS by the prescribed deadline. In support of state's efforts, the EPA established the Conformity Rule for Federal actions. The Rule contains three major provisions. First it requires Federal action proponents to identify the anticipated level of air emissions from both construction and operation of proposed projects. Secondly it established threshold emission levels as a basis for determining whether an action has the potential to interfere with the State's efforts under the CAA to achieve NAAQS within the established deadline. And lastly it requires Federal action proponents to prepare a Conformity Determination and offset project related emissions for actions with projected emission levels above the threshold.

Project related air emissions are quantified in annual increments (tons per year) as a basis of comparison to the threshold established in the Conformity Rule by the EPA (see Applicability Analysis Appendix A). Daily or hourly air emission rates would differ greatly based on a variety of localized conditions such as season, month, day (weekend/weekday/holiday), hour (AM, PM commuter peak), temperature, wind direction, wind velocity, humidity and overall weather, not to mention the affects of other activities within the area or those contributing to regional air pollution. While the Applicability Analysis describes in detail the considerations and



calculations used to approximate annual emissions for both construction and operation of the proposed projects, daily and hourly rates were not specified. A generalized hourly or daily rate could be approximated as a representative portion of the annual projections, but without a need to substantiate regulatory requirements or attainment of specified standards, a more detailed analysis for projected hourly and daily air emission rates are not warranted. It is also important to note that comments received by the EPA did not express a concern over the amounts or rates of projected air emissions for the proposed action.

8. Background noise within the vicinity of the WNY is typically attributed to vehicle traffic along major roadways within the area, local resident activities and the operation of several small businesses located in the vicinity of M and South Capital Street. While background noise is typically higher during the daylight hours, some traffic noise is present around the clock. Data on existing noise levels was obtained through monitoring at four sites along M Street immediately adjacent to the WNY. This information was provided in the EIS document. The average for measured background noise levels at each of the four sites ranges between 69 and 72.2 decibels in the morning and 72 to 76.1 decibels in the evening. The upper range of these background noise levels reflect intermittently higher noise levels associated with the passage of large trucks and busses. These estimated noise levels associated with sites immediately along M Street outside the WNY are expected to increase with higher volumes of traffic. An increase in traffic volumes on M Street is expected to occur with or without the BRAC relocation.

Due to short duration of the existing noise level measurements, these noise levels are not considered representative of the existing traffic-related noise. In addition, it is generally not appropriate for noise level modeling to be performed for a stop/go urban traffic situation. Subsequently, the projected noise level impacts were evaluated through an assessment of the net increase in noise levels from the proposed action. To estimate the net increase in noise levels due to the project, the traffic numbers provided in the Figures 2.2 and 2.3 of the TMP found in Appendix B were utilized. The future background peak hour traffic volumes were compared with the projected site generated traffic volumes, and the ratio was converted to a dB increase based on the energy content. The calculations performed demonstrate that the greatest change in noise levels attributable to the project is 2.3 dB increase, which would occur between 8th Street and 9th Street during the peak morning commuting period. Because this value is less than what is generally noticeable to the human ear, the addition of the project related traffic to M Street is not anticipated to have a significant impact on noise levels. Any increase that does occur would be further reduced by data shown on Figure 1.5 of the TMP, which indicates that the M Street traffic peaks at different times than the peak WNY commuting periods.

Mitigation measures to control traffic impacts associated with the BRAC action are described in Appendix B. Traffic related noise would decrease with distance from the roadway. It is also expected that traffic noise would also coincide with commuter volume gradually increasing and decreasing with peak flows. Construction related noise is expected to be intermittent and occur only during daytime work hours.

9. Additional information concerning contamination within the project site has been incorporated into the Final EIS. It includes the results of more detailed studies conducted in support of the NAVSEA projects and other cleanup efforts at the WNY. Mitigation is included where appropriate.



10. This EIS addresses the impacts associated with the development of additional office space at the WNY and other physical changes necessary to accommodate the BRAC relocation of NAVSEA personnel to the WNY. It was not intended to address base-wide contamination or cleanup efforts which are being handled under the base Installation Restoration Program. This program has its own public participation effort. The public's concern for this issue have been forwarded to appropriate personnel.
11. The noted assessment was the basis for the Traffic Management Plan (TMP), prepared concurrent to the Draft EIS. Several options for internal routing of vehicle and pedestrian traffic associated with the proposed NAVSEA projects were examined by the Navy with the help of a professional traffic consultant and a highly experienced architectural design firm. This information is provided in the WNY TMP, which appears as Appendix B of the Final EIS. The proposed circulation pattern along with a limitation on the creation of new parking spaces at the installation and expanded use of the Issac Hull Gates, offers the best viable solution for routing of anticipated traffic at the facility and mitigation of traffic related impacts.
12. This EIS analyzes the impacts of providing facilities and support for NAVSEA employees relocated to the WNY as a result of BRAC decisions. Although the project includes some modifications to the waterfront area, decisions regarding pedestrian access along the Anacostia waterfront or "enhancement of the area" are not part of the decisions to be made under this NEPA document.
13. See response to comment #12 above.
14. Detailed traffic related information associated with the proposed action is provided in the WNY TMP. While this analysis indicates only a minor decrease in LOS for traffic signals along M Street, the Navy will continue to intensively manage gate traffic to reduce queues during peak commuter periods, and is willing to work with District Transportation Managers should unforeseen problems arise.
15. Typically, the project architect reviews emergency access with the Fire Marshall during design. However, the proposed roadway changes within the western area of the WNY will not involve a reduction in travel lane widths or turning radii. Emergency access and routing will be maintained to all facilities within the Installation.
16. The anticipated growth in truck traffic was assessed in the TMP. NAVSEA functions in an administrative capacity and associated truck traffic would consist of intermittent deliveries by smaller delivery vehicles.
17. Comments #3, #4, and #5 in the correspondence note that the proposal conforms to several of the goals of the Comprehensive Plan for the National Capital. Although the decision to realign NAVSEA is a result of the BRAC process, it is consistent with the referenced Federal element in the Comprehensive Plan.
18. See response to comment #17 above.
19. See response to comment #17 above.
20. See response to comment #17 above.

21. See response to comment #17 above.
22. Cultural resources were considered one of the main issues associated with the planned projects. To adequately address potential effects of the proposals a detailed study was conducted and a special Cultural Resources Assessment of Effect was prepared. This extensive effort was applauded by cultural resources regulators who reviewed and participated in an analysis of the impacts of the proposed action and recommendations for mitigating adverse effects. While everyone may differ in their opinion of effect to cultural resources, the procedure used by the Navy in coordinating this effort obtained a consensus on the effects of the proposed action and fulfilled the procedural requirements associated with the National Historic Preservation Act. As part of its Cultural Resources Policy, the Navy is encouraged to reuse existing historic structures rather than developing new facilities. Reuse of historic structures is more economical than stretching dwindling military funding to maintain both new buildings and unused historic facilities.
23. See response to comment #17 above. The comment refers to the Comprehensive Plan for the National Capital with regard to demolition of historic structures. As noted in the NCPC's transmittal letter, the Navy has consulted closely with the NCPC regarding treatment of historic structures. The NCPC letter states that [the NCPC] "commends the Navy for its early and continued consultation with the Commission [NCPC] and others regarding treatment of historic buildings and the site." As stated in the EIS, the Navy acknowledges that the Preferred Alternative would require demolition of historic structures. However, the Navy has entered into a Memorandum of Agreement (MOA) which stipulates actions to be undertaken by the Navy that would mitigate the adverse effect of the NAVSEA Relocation on historic properties. One of the stipulations in the MOA insures that the Navy will continue to consult with the NCPC regarding the project design and that the NCPC comments on the project design will be synthesized into the final project design. No changes to the text of the EIS have been made in response to this comment.
24. This comment pertains to potential effects of the project on archaeological resources. As noted in the transmittal letter, the Navy has consulted closely with the appropriate review agencies and entered into a Memorandum of Agreement (MOA) to mitigate the effects of the NAVSEA relocation on cultural resources, including archaeological resources. One of the stipulations in the MOA requires the Navy to retain an archaeologist to implement a program of construction monitoring, in consultation with the District of Columbia Historic Preservation Office. No changes to the text have been made in response to this comment.
25. The potential effects of a 100 year flood event on an administrative facility would be considerably less than those for private residences or essential services. Should a rise in flood waters be anticipated, employees would not be permitted to occupy low-lying structures within the Washington Navy Yard. The project site slopes slightly from higher ground near M Street towards the waterfront. Specific elements of the project design, addressing flood protection for each of the project structures, would vary by building for each of the four alternatives. The first floor level of most buildings within the project site are open-bay areas with high ceilings and interior loading docks. Development of administrative space within these buildings would include raising first floor levels to dock height as protection against flooding. Two Buildings, 142 and 143, currently have established office space on the lower levels which are elevated only slightly above street level. Most of the first floor in Building 143 has a high ceiling where it would be possible to raise the floor level of office space on the first story. Building 142 was

originally designed as office space and is located at the lower end of the project site. It would be necessary to elevate the entrance to Building 142 or implement temporary measures to offset the effects of a 100 year flood. The floor level of Building 197 is already elevated above the surrounding surfaces which slope slightly downward towards the southern end of the building. As added protection against flooding, renovation of this structure for office space would include raising of the existing lower floor level. Additions to Building 197 for administrative space would incorporate a corresponding floor elevation.

26. The alternatives for the proposed development addressed in this EIS would limit the development of new parking at the WNY in response to the Comprehensive Plan parking ratio.
27. See response to comment #26 above.
28. Under the terms of a Memorandum of Agreement governing the treatment of cultural resources within the area of potential effect associated with the NAVSEA relocation, the Navy will retain an archaeologist to implement a program of construction monitoring.
29. Plans call for the repair or replacement of existing stormwater lines that serve the project site, installation of control structures and reduction of associated contaminants that may be associated with existing system.

Plans for stormwater management have been developed in coordination with District regulators. These plans call for directing stormwater from the upper two-thirds of the project site through control structures prior to discharge into the stormwater system. Because the water table is near the surface in the waterfront area, stormwater management for the lower third of the project site is limited. The plan calls for directing runoff through a sodded area of the water front before it reaches the underground collection system. The proposed action will result in an improvement of stormwater runoff from the project area.

30. Comment noted. See response to comment #6 above.
31. "Energy conservation measures" based on building design will vary for each of the alternatives. The overall project design and materials that can be used are limited, because the project site is associated with a National Historic Landmark. The Navy will incorporate energy conservation measures into building design where feasible and appropriate. While project plans include landscaping in and around buildings, a reduction in cooling costs is not expected to be significant due to the height and mass of the structures.
32. See response to comment #7 above.
33. See response to comment #8 above.
34. See response to comment #9 above.
35. See response to comment #12 above.
36. See NCPC-5 Above. Traffic flows can be affected by a wide variety of factors, but are greatly influenced by the most limiting factor. While queues associated with WNY parking structures would vary by alternative, as well as time of day, the primary factor affecting parking garage queues would be traffic controls at WNY gates. Adequate ingress would be provided within the

proposed parking structure to accommodate peak morning WNY commuters, in order to offset backups along M Street. While a reverse traffic flow within the parking structure would have an equal level of egress, traffic controls at M Street gates would ultimately dictate these queues. Just as limited parking at the WNY may be considered by some to be an adverse effect, the corresponding reduction in street traffic actually reduces traffic related impacts. Therefore, a projected queue related to ingress and egress of the proposed parking structure is not warranted.

37. Modifications to existing roadways within the project area are not expected to impact emergency vehicle access. The conversion of hard surfaces surrounding buildings and along the waterfront would include walkways that could be used by emergency vehicles. In addition to a service road between Buildings 116/118 and 197, hard surfaces completely surround these buildings and provide access for service and emergency vehicles. The proposed conversion of the paved area between the waterfront and this group of buildings would include an access road for service trucks and emergency vehicles. Construction plans will be submitted to the DC Fire Marshal concurrent with submittal of plans to NCPC for final site and building plan review.
38. Existing truck traffic at the WNY is associated with maintenance activities and the WNY supply facility. The bulk of the WNY supply storage and maintenance shops will be relocated to Anacostia Naval Station just before NAVSEA personnel are moved to the WNY. Larger trucks associated with these functions will shift operations to the Anacostia Naval Station. Smaller trucks will be used to transport supplies from the larger storage facility at Anacostia Naval Station to the WNY and service equipment and buildings. These smaller trucks typically operate during non-peak commuter hours and will be accommodated by reserving the necessary spaces as loading zones or near a buildings service entrance. NAVSEA is an administrative function and large truck traffic is not associated with their operations.

**Comments Received at Draft EIS Public Hearing - January 23, 1997**

Tony Simon  
National Capital Planning Commission  
801 Pennsylvania Avenue, NW Suite 301  
Washington, D.C. 20756

"Security check at M Street gate causes backup of cars onto M Street, as well as annoyance of delay." **1**

## **National Capital Planning Commission**

Tony Simon

801 Pennsylvania Ave., Suite 301

Washington, D.C. 20576

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### **Response to Comments as numbered on the preceding correspondence:**

1. The WNY is a military installation and controlled access serves to maintain security at the facility. We apologize for the inconvenience. See response to NCPC comment #14 and Appendix B.



DEPARTMENT OF THE ARMY  
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
P.O. BOX 1715  
BALTIMORE, MD 21203-1715

REPLY TO  
ATTENTION OF

February 18, 1997

Planning Division

Mr. Michael A. Bryan  
Head, Environmental Planning Branch  
Department of the Navy  
Engineering Field Activity, Chesapeake  
901 M Street SE  
Washington, DC 20374-5018

Dear Mr. Bryan:

I am providing a response to your request for Baltimore District's comments on the Draft Environmental Impact Statement evaluating the environmental effects of implementing the relocation of Naval Sea System Command Headquarters from Crystal City in Arlington, Virginia to the Washington Navy Yard in southeast Washington, D.C. The comments provided below address the Corps of Engineers' areas of concern, including direct and indirect impacts on existing and/or proposed Corps projects, flood control hazard potential, and regulatory requirements under Section 404 of the Clean Water Act.

Review of the information you provided indicates that the proposed project is located in the Anacostia watershed. The Corps is involved in three studies in the Anacostia watershed that focus on the impacts of federally owned lands and facilities on the watershed. The studies include the Anacostia Federal Facilities Impact Assessment, the Anacostia Federal Biennial Workplan, and the Anacostia River Basin Stormwater Management and Pollution Prevention Assessment. However, the Corps does not anticipate that the proposed project will have any impacts on these studies.

The proposed project will be located within the floodplain. New construction or major improvements within the floodplain require full compliance with Executive Order (E.O.) No. 11988, May 24, 1977, Flood Plain Management; Federal Emergency Management Agency (FEMA) regulations; and other Federal, state, and local floodplain regulations. The objectives of the E.O. No. 11988 and other floodplain regulations are to avoid the adverse effects of occupying and modifying the floodplain and to avoid direct and indirect support of development in the floodplain. The order requires that activities not be located in the floodplain unless this would be the only practicable alternative. Activities that must be located in the floodplain must incorporate measures to (1) reduce the hazard and risk associated with floods; (2) minimize the adverse effects on human health, safety, and welfare; and (3) restore and preserve the natural and beneficial values of the floodplain.

The proposed construction may cause an increase in water surface elevation (surcharge). FEMA regulations require that the surcharge not increase more than 1.0 foot. It is also suggested that the state and local resources agencies be contacted as some states and local governments have more stringent surcharge requirements than FEMA.

The subject report recognizes the need for floodplain evaluation and describes procedures to be used for the evaluation. The results of these evaluations should be documented and coordinated with Federal, State, and local water resources agencies before the final design of the proposed facilities is selected.

Certain activities in the waters and jurisdictional wetlands of the United States require Department of the Army permits from the Corps of Engineers. Corps regulations [33 CFR 320 through 330 and 33 CFR 230 and 325 (Appendix B)] require full compliance with the National Environmental Policy Act (NEPA) of 1969 during the review and evaluation of permit applications. To the maximum extent possible, the Corps will accept the information presented in NEPA documents for evaluating permit applications. If you have any questions or need additional information on regulatory requirements, the point of contact is Ms. Linda Morrison, Chief, Regulatory Branch, Baltimore District, at (410) 962-3670.

If you have any questions regarding this matter, please contact me or my action officer, Ms. Andrea E. Walker, at (410) 962-3027.

Sincerely,

  
Robert F. Gore  
Chief, Planning and Environmental  
Services



## **U.S. Army Corps of Engineers**

Robert F. Gore  
Chief, Planning and Environmental Services  
P.O. Box 1715  
Baltimore, MD 21203-1715

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### **Response to Comments as numbered on the preceding correspondence:**

1. The project site is located within the 100 year floodplain and appropriate measures will be incorporated into the project design to reduce the hazards and risk associated with flooding and minimize adverse effects to human health, safety and welfare.
2. The proposed project would reuse or replace existing structures at the WNY, which is not expected to displace additional water flows or increase water surface elevation within the area.
3. As described in the Draft EIS, the project site was created by construction of a seawall and filling low-lying areas of the Anacostia shoreline. This created land has been developed and redeveloped throughout the years. As a result of these activities the floodzone for this area has been altered, as was the functionality of the floodplain associated with the base. The loss of Navy property and consolidation of remaining activities resulting from Base Realignment And Closure process, necessitate a more intensive use of remaining Navy assets. The proposed plans have and will continue to be coordinated with District planning and regulatory agencies. The Navy's proposed action does not include any activity that would affect jurisdictional wetlands or require an ACOE permit.



IN REPLY REFER TO:

## United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Custom House, Room 244  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106-2004

February 13, 1997

ER 97/9

Mr. Hank Riek, Code 20E  
Engineering Field Activity Chesapeake  
Naval Facilities Engineering Command  
Building 212, Washington Navy Yard  
Washington, DC 20374-5018

Dear Mr. Riek:

The U.S. Department of the Interior (Department) has reviewed the draft Environmental Impact Statement (DEIS) to Relocate Naval Sea System Command Headquarters to the Washington Navy Yard, Washington, DC. We offer the following comments for your careful consideration.

### GENERAL COMMENTS

The proposed action is to provide the facilities and operational requirements needed to implement the 1995 Base closure and Realignment Commission recommendations to relocate the Naval Sea Systems Command Headquarters to the Washington Navy Yard, Washington, DC. The Navy's preferred alternative for providing up to 1 million square feet of additional office space for 4,100 relocated personnel entails the renovation of three buildings, demolition of five buildings, and construction of three new structures including an eight-level parking garage.

The Department, has determined that the DEIS adequately addresses anticipated project impacts upon fish and wildlife resources and their habitats. However, we are aware of current and proposed Superfund and stormwater studies investigating stormwater effluent quality, unpermitted discharges and environmental contamination at the Washington Navy Yard. We are concerned that implementation of the preferred action may result in modifications to the existing stormwater drainage system, which could interfere with these studies. Consequently, the Department recommends that the Navy design any necessary stormwater modifications in a manner that will not interfere with the contaminant studies.

1

2

**SPECIFIC COMMENTS****Endangered Species Act**

Except for occasional transient individuals, no Federally listed or proposed threatened or endangered species under our jurisdiction are known to exist in the project area. Therefore, no Biological Assessment or further Section 7 consultation pursuant to the Endangered Species Act is required with the FWS. For information on other rare species, please contact the District of Columbia Natural heritage Program at (301) 927-1354. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

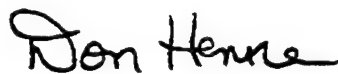
**SUMMARY COMMENTS**

The DEIS adequately addresses anticipated project impacts upon fish and wildlife resources, including federally listed and proposed species. Our only concern is that modification of the stormwater drainage system may interfere with the ongoing and proposed environmental contaminant studies. We recommend that such work, if any, be carefully designed to minimize effects.

Questions regarding these comments and coordination on ongoing and proposed contamination studies should be directed to Ms. Laura Hamilton, FWS, Chesapeake Bay Field Office, Annapolis, Maryland at (410) 573-4545.

Thank you for your consideration of these comments, and for granting our request for an extended comment period.

Sincerely,



Don Henne  
Regional Environmental Officer

**U.S. Department of the Interior**

Office of the Secretary  
Office of Environmental Policy and Compliance  
Custom House, Room 264  
200 Chestnut Street  
Philadelphia, PA 19106

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**Response to Comments as numbered on the preceding correspondence:**

1. Comment noted. Thank you.
2. Implementation of the alternatives action would include stormwater management within the project site, which is intended to mitigate the effects of the proposed development. The effects of the changes to ongoing studies will be considered by the Navy.

To: <hjriek@efaches.navfac.navy.mil>  
Cc:  
Bcc:  
From: Lamar Smith <LSSMITH@intergate.dot.gov>  
Subject: DEIS Base Realignment and Closure Action - Naval Sea Command  
Date: Friday, January 10, 1997 9:18:41 EST  
Attach:  
Certify: N  
Priority: Normal  
Defer until:  
Expires:  
Forwarded by:

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To whom it may concern,

On behalf of the Region 3 Office of the Federal Highway Administration, I have reviewed the draft environmental impact statement (DEIS) for developing additional office space at the Washington Navy Yard to support the relocation of personnel associated with the Naval Sea System Command. The focus of my review was on the affect of the action on the existing transportation system and in that regard I find that I have no comments. Thank you for the opportunity to comment on the action.

1

Lamar S. Smith, Environmental Specialist  
10 South Howard Street, Suite 4000  
Baltimore, MD 21201  
410-962-4345

**U.S. Department of Transportation**

Lamar Smith

Federal Highway Administration, Region III

10 South Howard Street, Suite 4000

Baltimore, MD 21201

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**Response to Comments as numbered on the preceding correspondence:**

1. Via electronic mail. Thank you for your review.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107-4431

JAN 31 1997

Mr. Michael A. Bryan  
Head, Environmental Planning Branch  
Engineering Field Activity, Chesapeake  
Washington Navy Yard Building 212  
901 M Street, SE  
Washington, DC 20374-5018

Re: Base Realignment and Closure Action, Naval Sea Systems  
Command, Washington Navy Yard, Washington, DC

Dear Mr. Bryan:

In accordance with the National Environmental Policy Act (NEPA) of 1969 and Section 309 of the Clean Air Act, EPA has reviewed the Draft Environmental Impact Statement (DEIS) for the above referenced project. EPA has assigned this DEIS a rating of EC-2 (Environmental Concerns/Insufficient Information) based on the following comments. A copy of EPA's ranking system is enclosed for your information.

- We are concerned with the preservation of the historic properties impacted by the preferred alternative. The National Historic Preservation Act of 1966 requires all Federal agencies to assume responsibility for the preservation of historic properties owned or controlled by the agency. Therefore, we await the District of Columbia Historic Preservation Office's and the National Advisory Council on Historic Preservation's approval of the Memorandum of Agreement governing the treatment of cultural resources at the Washington Naval Yard (WNY).

- To better assess the environmental and health effects associated with the buildings slated for demolition and renovation (for the preferred alternative), a description of past and present activities within these buildings is needed. Also, data on the past and present generation of hazardous substances associated with these buildings should be provided along with specific remediation actions. Of primary interest is Building 197 which was noted as an "area of concern" based on the results of the Preliminary Assessment.

- Testing found that subsurface soil and groundwater throughout the WNY contained detectable levels of metals. The potential exists for these contaminants to drain to the stormwater system which empties into the already corroded Anacostia River. Measures to minimize and mitigate adverse effects to the water quality of the Anacostia River from the proposed action should be specified in the FEIS.

- The DEIS also states that "Some sites also contained semivolatiles, while a few sites showed evidence of volatiles or pesticides." The FEIS should specify where these contaminants were found.

5

For your consideration, we have also provided recommendations on pollution prevention and water and energy conservation to be used with the proposed renovation, demolition, and construction of buildings. It is suggested that the WNY go beyond these and encourage innovative pollution prevention strategies and conservation methods in the design of all facilities. The construction and renovation of buildings proposed by WNY provides a good opportunity for a Federal agency to assume a leadership role in pollution prevention.

#### Pollution Prevention

- Heavy construction equipment can be properly tuned, maintained, and fueled with a low sulfur content diesel fuel to reduce emissions. The construction areas could be watered frequently to reduce dust and construction activities should be suspended during high winds.

6

- Non-toxic paints, stains, exterior preservatives, and chemical-free carpeting should be used and specified. This can reduce long-term costs for removal of potentially hazardous materials and provide better air quality.

7

- Recycling of materials (i.e., paper, cardboard, aluminum and plastics) should be encouraged and stations designed into the facility. Collecting recyclable materials is only part of the recycling process. Procurement of recycled goods is also necessary and helps to stimulate markets. As a consumer and purchaser of goods and services, the WNY is encouraged to make purchasing decisions with this in mind.

8

#### Water Conservation

- If space allows, grounds should be landscaped with hardy native plant species to cut down on watering and lessen the need for pesticides and fertilizers. Liberal and judicious use of trees can help to reduce heating and cooling costs and act as air purifiers.

9

- Low-flow toilets should be installed in new facilities and as replacements where necessary in existing facilities.

10

- To ensure adequate supply and quality to water, monitoring of the water table and chemical testing of the water can be conducted.

11

#### Energy Conservation



- Energy-efficient heating and cooling systems, proper building insulation, and the use of energy-efficient lighting can be incorporated in the design of any new facilities to reduce cumulative impacts of energy consumption and encourage energy conservation. For example, take advantage of natural ventilation as well as using compact fluourescent lamps which consume considerably less electricity than do incandescent ones and last much longer.

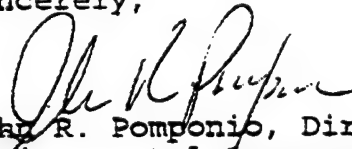
12

- Install energy efficient windows and doors (for example, reflective glass).

13

Thank you for the opportunity to review and comment on this project. If we can be of further assistance, please contact Karen Del Grosso at 215-566-2765.

Sincerely,

  
John R. Pomponio, Director  
Environmental Assessment and  
Protection Division

Enclosure

## **AND FOLLOW UP ACTION\***

### **Environmental Impact of the Action**

#### **LO--Lack of Objections**

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

#### **EC--Environmental Concerns**

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

#### **EO--Environmental Objections**

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### **EU--Environmentally Unsatisfactory**

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

### **Adequacy of the Impact Statement**

#### **Category 1--Adequate**

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

#### **Category 2--Insufficient Information**

The draft EIS does not contain sufficient information for the EPA fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

#### **Category 3--Inadequate**

EPA does not believe that draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment.

## **U.S. EPA, Region III**

Environmental Assessment and Protection Division

Mr. John R. Pomponio, Director

841 Chestnut Building

Philadelphia, PA 19107-4431

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### **Response to Comments as numbered on the preceding correspondence:**

1. The Washington Navy Yard National Historic Landmark District contains many historic properties. To evaluate the impact of the proposed action, the Navy has undertaken an extensive survey of cultural resources associated with the project site. A report of the study findings are presented in the Cultural Resources Assessment of Effect (CRAE), which was prepared separately in support of this EIS. This document and the proposed mitigation of potential effects for the proposed action have been developed in coordination with a working group of District planners and regulatory personnel. Reuse of existing historic buildings for additional requirements is consistent with Navy policy and represents a sensible use of dwindling military assets and funding. In compliance with Section 106, the Navy has formally entered into a MOA with the District of Columbia Historic Preservation Office and the Advisory Council on Historic Preservation. A copy of the MOA is appended to this document (see Appendix D). Please refer to the correspondence/comments from the National Capital Planning Commission of this subject.
2. An intensive investigation of the types of activities that occurred within project related structures was carried out to assess both the relationship of its contribution to the history of the installation and potential for contributing to contamination of the Installation. This information can be found in various documents, such as the CRAE and Preliminary Assessment (PA). Specific safeguards and remediation will be implemented as part of the project related activities to protect workers and mitigate the effects of contamination. This information has been summarized and incorporated into the Hazardous Material Sections of the Final EIS. Copies of the supporting documentation may be obtained upon request from the POC.
3. See response to comment #2 above.
4. The stormwater system for the proposed projects has been developed in coordination with regulatory officials. It will include filters, control structures and the repair or replacement of associated branch lines. These measures have been incorporated into the description of the proposed action. Specific details concerning the proposed stormwater management plan may be viewed upon request by contacting the Navy representative listed on the cover sheet of this document. Although not part of the EIS's proposed action, a comprehensive examination and repair of all stormwater lines is currently underway in support of an EPA issued draft NPDES permit for the Installation.
5. See response to comment #2 above.
6. Thank you for your recommendation. Contractors are required to properly maintain construction vehicles and use appropriate fuel. Previous conversions of large open bay structures to

administrative facilities at the WNY correlate to a reduction in steam heat demands at the installation. Therefore, implementation of the proposed action is not expected to exceed the limits of the permitted operation for this facility. The limited development of new parking spaces will provide only one parking space for every three employees at the WNY, in compliance with the Comprehensive Plan for the National Capital. The proposed one-way routing of internal WNY traffic associated with the project site, was developed in conjunction with a professional traffic management firm as the best solution to internal traffic flows.

Thank you for your recommendations. Dust suppression is one of the Best Management Practices that will be employed as part of the Erosion and Sediment Control Plan for the project.

7. Thank you for your recommendation. The Navy does not plan to use lead based paints as part of the planned activities in this EIS.
8. Thank you for your recommendation. A recycling program is in place at the WNY and the new facilities will be included within this program.
9. Thank you for you recommendation. The Navy plans to replace waterfront parking with vegetation as part of the project. Appropriate vegetation would be used around project related buildings and roadways.
10. Thank you for your recommendation. The Navy will use low-flow toilets for the project.
11. Thank you for your recommendation. Little vegetation exists at the WNY. Irrigation and fertilization of vegetation at the WNY is a maintenance activity rather than a component of the proposed action.
12. Thank you for your recommendation. Energy efficient equipment and conservation measures will be incorporated into the project components.
13. Thank you for your recommendation. Energy efficient window and doors will be used where appropriate.

DC Preservation League  
1511 K Street, N.W.  
Suite #739  
Washington, DC 20005  
February 10, 1997

Hank Riek  
Code 20E  
Engineering Field Activity-Chesapeake  
Naval Facilities Engineering Command  
901 M Street, SW  
Building 212  
Washington Navy Yard  
Washington, DC 20373-5018

Dear Mr. Riek,

Thank you for providing the DC Preservation League with a copy of the Navy's *Draft Environmental Impact Statement*, and the *Cultural Resources Assessment of Effect* document, pertaining to the proposed development at the Washington Navy Yard as part of the 1995 Base Closure and Realignment Action. I have reviewed these documents on behalf of the DC Preservation League and now offer the following comments.

The League is highly concerned to learn that three of the four alternatives, including the preferred course of action, will have a high level of adverse effect on contributing resources to this National Historic Landmark and National Register Historic District. These scenarios call for the destruction of from four to six structures. In addition to demolition, renovations and additions will adversely impact a varying number of retained structures and large-scale new construction will create a negative visual impact on the district.

Much of the Washington Navy Yard's significance is derived from the fact that extent buildings reflect the facility's 200-year continued operation, and functional and technical evolution. The League, therefore, can not support new development that will significantly effect the largest concentration of World War I-era structures within the historic district. We recognize that, as it has so done

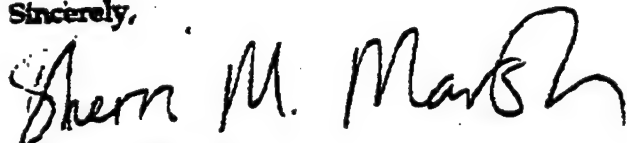
in the past, the Yard must change and adapt to remain viable, but we sincerely hope that future development is planned for in a context that is sensitive to its distinguished history.

The League commends the Navy for their plans to utilize extant historic buildings, and highly supports this course of action over demolition. To this end, the League prefers Alternative 2. In Alternative 2 the Building 143/28/176/201 grouping would be renovated rather than demolished. Regrettably, the construction of the 12-level parking garage called for in this scenario will have an adverse visual impact, but because demolition is permanent while new construction is reversible, this is a less egregious course of action.

We understand that throughout this project, the Navy has worked in close cooperation with the District of Columbia's State Historic Preservation Officer, the Advisory Council on Historic Preservation, the National Capital Planning Commission, and the Commission of Fine Arts. We encourage the continuation of this dialogue and hope that, no matter which alternative is decided upon, appropriate mitigation measures aimed at reducing the adverse effects of the proposed action will be taken.

Thank you for considering the views of the DC Preservation League in your plans. Please do not hesitate to contact our office if we can be of any assistance in this matter. Our phone number is (202) 737-1519.

Sincerely,



Sherri M. Marsh  
DC Preservation League,  
Landmarks Committee, Chair

## **DC Preservation League**

Sherri M. Marsh  
Landmarks Committee, Chair  
1511 K Street, NW  
Suite #739  
Washington, DC 20005

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### **Response to Comments as numbered on the preceding correspondence:**

1. Cultural resources were considered one of the main issues associated with the planned projects. To adequately address potential effects of the proposals a detailed study was conducted and a special Cultural Resources Assessment of Effect was prepared. This extensive effort was applauded by cultural resources regulators who reviewed and participated in an analysis of the impacts of the proposed action and recommendations for mitigating adverse effects. While everyone may differ in their opinion of effect to cultural resources, the procedure used by the Navy in coordinating this effort obtained a consensus on the effects of the proposed action and fulfilled the procedural requirements associated with the National Historic Preservation Act. As part of its Cultural Resources Policy, the Navy is encouraged to reuse existing historic structures rather than developing new facilities. Reuse of historic structures is more economical than stretching dwindling military funding to maintain both new buildings and unused historic facilities.



SABRA L. JONES  
CLERK TO THE COUNTY BOARD

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**OFFICE OF THE COUNTY BOARD**  
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JAMES B. HUNTER, III

February 3, 1997

Mr. Hank Riek, Code 20E  
Department of the Navy  
Engineering Field Activity Chesapeake  
Naval Facilities Engineering Command  
Building 212, Washington Navy Yard  
Washington, D.C. 20374-5018

Dear Mr. Riek:

Staff in the Department of Environmental Services (DES) reviewed the Draft Environmental Impact Statement (DEIS) for the relocation of the Naval Sea System Command Headquarters (NAVSEA) from Crystal City to the Washington Navy Yard. The report focuses on four design alternatives for the provision of required administrative office space at the Navy Yard. The four alternatives envision a blend of new construction and renovation or demolition of existing buildings within the confines of the Navy Yard.

The DEIS does not identify a schedule for the NAVSEA relocation out of Arlington, other than to state that the new facilities at the Navy Yard will be constructed in time for the move to be accomplished by the year 2001, as required by the final round of Base Realignment and Closure (BRAC) decisions in 1995.

The space requirements, including one million square feet and up to 4,100 personnel who would be relocated, are consistent with information submitted by the Department of the Navy. It is likely, however, that the final personnel number will be lower, due to the Navy's plans to continue downsizing between now and the projected move date.

The projected air quality impacts of the proposed relocation appear relatively minor, although given the region's designation as a serious ozone nonattainment area, every effort should be made to minimize additional emissions of hydrocarbons and

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nitrogen oxides that result in ozone. One of the unfortunate aspects of the relocation is that the Navy Yard is less well served by mass transit opportunities than is Crystal City. The Navy should be encouraged to pursue an aggressive policy supporting reductions in single occupancy vehicle use.

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The only other environmental issue of concern, which is discussed only briefly in the report, concerns remediation of any contaminated sites affected by the proposed construction activity. Because of historical industrial activity on the site, there are apparently a number of contamination issues that must be addressed at the Navy Yard. A recent newspaper article in the *Washington Post* indicated that the U.S. Environmental Protection Agency is working with the Navy to develop and implement a cleanup plan for the Navy Yard.

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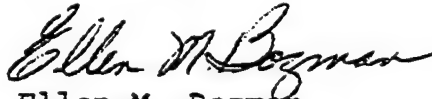
As more detailed work begins on the selected alternative, special attention needs to be given to the contamination problem to ensure that construction workers, as well as NAVSEA workers, are not exposed to hazardous materials. Particularly during construction, efforts need to be made to ensure that excessive dust is not created that could blow into surrounding neighborhoods. Erosion and sediment control practices during construction also need to be followed to ensure that no contaminated materials enter the Navy Yard's stormwater collection system, thereby adversely affecting the already polluted Anacostia River.

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Thank you for this opportunity to comment on the DEIS for the relocation of NAVSEA to the Navy Yard.

Sincerely,



Ellen M. Bozman  
Chairman

c: Jill F. Neuville, Director, DES  
Jeffrey Harn, Environmental Planning Section Coordinator,  
DES

## **Arlington County, Virginia**

Office of the County Board  
Ellen M. Bozman, Chairman  
#1 Courthouse Plaza Suite 300  
2100 Clarendon Boulevard  
Arlington, VA 22201

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### **Response to Comments as numbered on the preceding correspondence:**

1. A schedule for the NAVSEA relocation is contingent on the alternative selected and progress of construction activities. It is envisioned that construction would start in 1997 and continue over the next three years. While some buildings or project components may be completed sooner than others, the majority of NAVSEA personnel would not be relocated to the WNY until early 2001.
2. The EIS evaluates the impacts of the relocation, based in part on the number of NAVSEA personnel to be relocated to the WNY. While changes in personnel levels associated with NAVSEA would be purely speculative, the analysis of impacts associated with the relocation of 4100 NAVSEA personnel would adequately address impacts of a smaller relocation.
3. The proposed action includes a restriction in the number of parking spaces that will be available to Navy personnel and visitors at the WNY. This restriction will reduce the number of single occupancy vehicles (SOV) and traffic related air emissions associated with the increase in personnel at the facility. The WNY is served by two metro stations and has access to major freeways. Van and car pools associated with Navy employees are expected to continue at the new location. Bus service constantly shifts in response to ridership demands, therefore, an increase in service to the WNY is expected to follow relocated employees.
4. See response to comment #3 above.
5. An intensive investigation of the types of activities that occurred within project related structures was carried out to assess both the relationship of its contribution to the history of the installation and potential for contributing to contamination of the Installation. This information can be found in various documents, such as the CRAE and Preliminary Assessment. Specific safeguards and remediation will be implemented as part of the project related activities to protect workers and mitigate the effects of contamination. This information has been summarized and incorporated into the Hazardous Material Sections of the Final EIS. Copies of the supporting documentation may be obtained upon request from the POC.
6. Specific mitigation will be used to protect construction workers and Navy employees from the possible effects of contamination and cleanup of the project site. Dust suppression, precipitation runoff controls and pre-treatment of excavation dewatering are included as part of the project construction. The repair and installation of stormwater conveyance structures associated with the project site are expected to mitigate the effects to water quality from the proposed action.

7. See response to comment # 5 above.

# The Chamber

Arlington Chamber of Commerce

220 15TH STREET, NORTH • SUITE 111

ARLINGTON, VIRGINIA 22201

TEL (703) 575-0001 • FAX (703) 575-5770

February 12, 1997

Mr. Hank Riek, Code 20E  
Engineering Field Activities Chesapeake  
Naval Facilities Engineering Command  
Building 212, Washington Navy Yard  
Washington, D.C. 20374-5018

Re: Comments of the Arlington Chamber of Commerce on the Draft  
Environmental Impact Statement for the NAVSEA Relocation

Dear Mr. Riek:

On behalf of the Arlington Chamber of Commerce, I am submitting the enclosed comments on the Draft Environmental Impact Statement relating to the 1995 Base Realignment and Closure Action proposal to relocate the Naval Sea Systems Command ("NAVSEA") to the Navy Yard in Washington, D.C. I understand that in conversation with one of our attorneys in this matter, Susan Mathiascheck, you agreed to extend the deadline and accept our comments until 5 p.m. on Wednesday, February 12.

Thank you for your assistance. We appreciate your consideration of our comments and encourage you to contact us through Ms. Mathiascheck, (202) 457-6524, should you have any questions regarding this matter or if we can be of further assistance.

Sincerely,



Richard V. Doud, Jr.  
President

1997 Annual Corporate Sponsors:



**COMMENTS OF THE ARLINGTON CHAMBER OF COMMERCE  
ON THE DEPARTMENT OF THE NAVY  
DRAFT ENVIRONMENTAL IMPACT STATEMENT ON  
THE 1995 BASE REALIGNMENT AND CLOSURE ACTION  
FOR THE NAVAL SEA SYSTEMS COMMAND  
WASHINGTON NAVY YARD,  
WASHINGTON, D.C.**

These comments outline some of the deficiencies of the Draft Environmental Impact Statement ("DEIS") released by the Department of the Navy ("Navy") in December 1996 relating to the proposed relocation ("Proposal") of the Naval Sea Systems Command ("NAVSEA") from its current location in Crystal City to the Washington Navy Yard ("WNY" or Navy Yard). If implemented, the Proposal would force an additional 4,000 plus people to work every day on a site that is seriously contaminated with heavy metals, including lead, mercury and arsenic, polychlorinated biphenyls ("PCBs"), polyaromatic hydrocarbons ("PAHs"), semi-volatile organic compounds ("SVOCs") and a host of other hazardous substances. The contamination at the Navy Yard, which has been accumulating for more than 200 years, has been, and continues to be, a significant source of contamination identified in adjacent areas, including the Anacostia River. Despite a struggle of more than a decade by community and environmental groups to obtain the Navy's agreement to remedy contamination associated with the site, the Navy has taken no significant remediation steps. Even more remarkably, the Navy has not committed to take any such actions before razing buildings, excavating site soil, exposing construction workers directly to contaminated materials and soils, and moving over 4,000 individuals to the site.

Given the deplorable state of the environment at the Navy Yard, one would expect the DEIS to examine carefully the risks and impacts of the movement of thousands of personnel to the site, and the concomitant demands and changes to buildings and infrastructure. In fact, however, the DEIS seemingly does not consider the contaminated state of the site or the Anacostia River relevant to its analysis of the "environmental impacts" of the Proposal. As set forth in greater detail below, even in those sections of the DEIS specifically identified as addressing "hazardous waste and materials," no serious effort is made to consider the disastrous consequences of relocating a large population to a hazardous waste site before the Navy plans or even

agrees to any cleanup. Similarly, the DEIS virtually ignores the impact of the Proposal on air and water.

The DEIS's failure to consider each of these various potential impacts of the Proposal parallels its inadequate evaluation of alternatives to moving the NAVSEA command. As discussed below, before the Navy can relocate NAVSEA to the Navy Yard, the National Environmental Policy Act ("NEPA") requires careful evaluation of the relative merits of reasonable alternatives. The purpose of an EIS is not to justify a decision already made, but to aid in the decisionmaking process. As it happens, this DEIS does neither. For all of these reasons, the DEIS is inadequate and demonstrates that the Navy has failed to evaluate properly the consequences of its proposed actions.<sup>1</sup>

The DEIS is also inadequate in its evaluation of the impacts of the Proposal on the historic and archaeological value of the Navy Yard. The Navy Yard has unique cultural and historic value which would be seriously affected by the Proposal. The DEIS does not address these effects in sufficient depth. Likewise, the DEIS attempts to disregard the impact of bringing another 4,000 commuters to the Navy Yard by simply stating that traffic will not increase because it is bad enough already.

Finally, the DEIS fails to consider adequately environmental justice issues in light of the Navy Yard contamination. Hazardous substance contamination in the area of the Navy Yard (both existing and future contamination exacerbated by the Proposal) has a disparate impact on minority and low-income individuals. The DEIS neither considers the potential impact of the Proposal on any possible future remedial activity in or around the Navy Yard, nor adequately addresses the direct exacerbation of pollution in the area attendant to the proposed move. Each of these environmental impacts disproportionately falls on the minority and low-income residents of the Navy Yard area.

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<sup>1</sup> To the extent that the Navy supplements the DEIS and/or the information it incorporates, we reserve the right to comment further when such further information is made available.

## I. BACKGROUND

NAVSEA is a division of the Navy engaged in administering the acquisition and development of contracts and programs for ships, submarines and associated weapons systems. NAVSEA includes the Naval Sea Systems Command, the Nuclear Propulsion Directorate (SEA 08), the Human Resources Offices supporting the Naval Sea Systems Command, and associated Program Executive Officers.

Under the Defense Base Closure and Realignment Act of 1990 ("DBCRA") (Public Law 101-510), the Navy proposes to move NAVSEA from its leased office space in Arlington, Virginia to the Navy Yard in Southeast Washington, D.C. Due to the lack of existing office space at the Navy Yard, approximately 1,000,000 square feet of additional administrative space and parking for about 2,000 vehicles would be needed to accommodate the 4,100 relocating personnel. Other infrastructure and services would be needed at the Navy Yard to provide the necessary facility and operational requirements generated by the NAVSEA relocation. Several alternatives for providing additional office space at the Navy Yard have been identified and all include substantial demolition, new construction and/or renovation of existing facilities. The Navy prepared a Draft Environmental Impact Statement ("DEIS") to examine concerns relating to this proposed relocation.<sup>2</sup>

The Navy Yard is located along the Anacostia River and is the oldest U.S. Navy installation in continuous use. Among other things, it formerly served as a shipbuilding yard and as a manufacturing facility. It is now an administrative facility. Past industrial uses have contaminated the Navy Yard and the Anacostia River with hazardous materials and substances generated by various operations including plating, metal foundries, machine shops, and other manufacturing activities.

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<sup>2</sup> On May 1, 1996, a Notice of Intent ("NOI") to prepare the Environmental Impact Statement ("EIS") was published in the Federal Register, 61 Fed. Reg. 19263, and a public notice was published in the *Washington Post* and the *Washington Times* on April 28, 1996. A scoping letter was sent to public agencies, organizations and individuals with special expertise or interest in the proposed action. The notice provided general information on the proposed action and alternatives, identified issues to be examined in the DEIS, scheduled a public scoping meeting, advised of the need to coordinate information, and requested community involvement in the EIS process. A scoping meeting was held on May 18, 1996 at Hine Junior High School in Washington, D.C. Comments received through the scoping process were addressed in the DEIS which became available in December 1996. The Navy held a public hearing on January 23, 1997 at the Navy Yard to address the DEIS and the proposed relocation of NAVSEA. The severe environmental hazards at the Navy Yard were the primary focus of the hearing.

Because of this contamination, the Navy Yard has been the subject of intense scrutiny on environmental issues. The United States Environmental Protection Agency ("EPA") has begun various investigatory and/or administrative efforts directed at remediation of the Navy Yard site, but those efforts have not yet borne fruit. Currently, the EPA is in the process of evaluating the Navy Yard for listing on the Superfund "National Priorities List" as a site requiring "priority" cleanup. In addition, EPA has been attempting to reach agreement with the Navy on the scope of an administrative order pursuant to Section 7003 of the Resource Conservation and Recovery Act ("RCRA"), which allows EPA to sue to require the Navy to take such actions "as may be necessary" to respond to "an imminent and substantial endangerment of human health." 42 U.S.C. § 6973(a). Such an agreement would reportedly address, at a minimum, various areas of soils where contaminants are particularly highly concentrated ("hot spots"). At least one of these "hot spots" is immediately adjacent to the area where construction and/or renovation would occur under the Proposal. Another is nearby, in the area of "Admiral's Row." In addition to these Superfund and RCRA initiatives, EPA has filed suit against the Navy seeking \$1 million in fines for violations of various requirements relating to underground storage tanks at the Navy Yard.

Similarly, various community groups have sought to force remediation of the Navy Yard through legal action. On April 22, 1996, the Barry Farm Resident Council, the Kingman Park Civic Association, the Anacostia Watershed Society, and Friends of the Earth served notice upon the Navy of their intent to sue pursuant to § 7002(a)(1)(B) of RCRA, 42 U.S.C. § 6901, *et seq.* and § 505 (a)(1) of the Clean Water Act, 33 U.S.C. § 1251, *et seq.* This notice alleged that the Navy has contributed to the disposal of solid and hazardous wastes that may present an imminent and substantial endangerment to health and the environment under the criteria set forth in Section 7002 of RCRA, and that the Navy is discharging pollutants into the Anacostia River without a permit in violation of the Clean Water Act.

Numerous environmental studies conducted at the Navy Yard solidify concerns about the presence of hazardous substances at the Navy Yard. A 1993 Preliminary Assessment ("PA") of the Navy Yard identified 16 areas of potential contamination at the site, based on a review of historical documents, maps, personnel interviews, and discussions with state and federal agencies. A Site Investigation ("SI") was conducted under the Atlantic Division,



Naval Facilities Engineering Command ("LANTDIV") Comprehensive Long-Term Environmental Action Navy ("CLEAN") Program in order to gain a better understanding of the nature of the potential human health threats posed by the 16 sites at the Navy Yard. The SI focused on determining whether any areas within the Navy Yard are releasing hazardous substances, pollutants, or contaminants into the environment. The investigation included a land survey, a soil-gas survey, and collection of surface water, sediment, soil and groundwater samples for laboratory analysis. The final report confirmed that there is substantial contamination at these and other locations throughout the Navy Yard.

**II. THE DEIS FAILS TO ADDRESS REASONABLE ALTERNATIVES AND INADEQUATELY ADDRESSES SEVERAL KEY ISSUES REGARDING THE PROPOSED ACTION'S ENVIRONMENTAL IMPACTS**

8

**A. The DEIS Does Not Adequately Detail Why Alternative Relocation Sites Are Unsuitable.**

Subsection C of the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* ("NEPA" or the "Act"), in relevant part, states that an agency must:

include in every recommendation or report on proposals for . . . major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on-

- (i) the environmental impact of the proposed action. . .
- (iii) the alternatives to the proposed action.

42 U.S.C. § 4332(2)(C).

Beyond its requirement that an Environmental Impact Statement must be prepared, the Act further requires that the responsible agency for any major Federal action "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal. . ." 42 U.S.C. § 4332(2)(E). Under NEPA, an agency must consider a range of reasonable alternatives for its proposed action, and its discussion of the alternatives in the EIS should be reasonably detailed and sufficient to demonstrate that the agency made a reasoned decision.

The Council on Environmental Quality's ("CEQ") NEPA regulations require that a DEIS fulfill and satisfy, to the fullest extent possible, the requirements established for final statements in Section 102(2)(C) of the Act. See 40 C.F.R. § 1502.9(a). If any portion of a DEIS is so inadequate as to preclude meaningful analysis, the responsible agency must prepare and circulate a revised draft of such portion. *Id.* The Navy has promulgated its own NEPA regulations, found at 32 C.F.R. pt. 775, which arguably incorporate by reference the CEQ regulations. See 32 C.F.R. § 775.3(a) (Navy is to act consistently with "national environmental policies").

The DEIS is clearly inadequate under the CEQ NEPA regulations and under the Act in that it fails to provide detailed information regarding alternatives to its proposed relocation to the Navy Yard. The DEIS asserts that the purpose and need for the proposed action is to implement the 1995 BRAC relocation of 4,100 NAVSEA personnel to the Navy Yard. According to the Navy, the relocation will require approximately 1,000,000 square feet of office space or a comparable amount of suitable real property to convert and/or build upon; the space must be consolidated within the same general location, with additional space for parking for 2,000 vehicles and other infrastructure and services needed to satisfy facility and operational requirements. DEIS at 1-1 and 1-3. Further, the receiver site must be served by public transportation, compatible with existing government functions, and consistent with local development plans and policies. DEIS at 1-1.

The DEIS states that the Navy considered 17 alternative sites in the metropolitan Washington D.C area for its NAVSEA relocation but these sites "failed to meet the criteria" established by the Navy. However, in support of its claim that these sites failed to meet the established criteria, the Navy makes very general and conclusory statements about the insufficiency of these alternatives. The DEIS fails to provide any specific details about the 17 alternative sites considered. Indeed, it does no more than make general statements such as "insufficient suitable real property assets," "incompatible with community plans/policies," "lack of public transportation," or "incompatible with existing DoD missions."

The DEIS does not provide an adequate or objective discussion of the ways in which the alternative sites fail to meet the Navy's criteria. For example, it provides no information about

the square footage available at any of the alternative sites or if 1,000,000 square feet is unavailable, whether any of the sites would provide the Navy with a "comparable amount of suitable real property to convert and/or build upon." The DEIS is also deficient in that it does not provide operating definitions for some of its required criteria. For example, it does not make clear what would satisfy the Navy's definition of a "comparable amount" of property. Moreover, the DEIS does not shed any light on whether any of the alternative sites are suitable for, and whether the Navy gave serious consideration to, construction of structures larger than those planned at the Navy Yard. Considerations about alternative relocation sites should include whether any of the sites are amenable to high-rise structures rather than the low-rises planned at the Navy Yard; and how many structures could reasonably be constructed and/or converted for office space at each of the alternative sites.

The Navy's criterion of service by public transportation is similarly vague. Although one site is said not to have met the Navy's criteria for relocation because of "minimal" public transportation, the DEIS does not outline what the public transportation requirements for relocated personnel would be, and what is meant by "minimal" public transportation.

The above issues necessitate that the Navy fully analyze the 17 alternative relocation sites and set forth such analysis in writing before finalizing any decision to relocate to the Navy Yard. Additionally, it must prepare a supplemental or revised DEIS with a full discussion of why each of these alternative sites fails to satisfy the criteria established by the Navy. A revised DEIS should detail how much office space will be available at each site, whether NAVSEA can be accommodated with the construction of high-rise buildings, what the transportation needs of the transferred personnel will be, what transportation methods are available, and details regarding the difficulties to access public transportation. Additionally, a revised DEIS should include a discussion of how the 17 alternative sites failed to meet the Navy's criteria because of "incompatibility with community plans/policies."

**B.     The DEIS Does Not Adequately Consider  
Hazardous Substances At The Navy Yard.**

The Proposal provides for extensive renovation, construction, reconstruction, excavation, landscaping, and other activities that are required to make an area of the Navy Yard that now contains old -- and, in some cases, abandoned -- buildings into an office complex suitable for accommodating more than 4,000 employees. Remarkably, however, in purporting to evaluate the environmental impacts of the Proposal, the DEIS barely mentions the fact that the Navy Yard is heavily contaminated with hazardous substances. The DEIS insufficiently evaluates the potential environmental impact of the Proposal because it inadequately addresses the potential impact of the Navy Yard's hazardous contamination on construction workers and NAVSEA personnel. Moreover, the DEIS does not address at all the likely presence of other individuals (e.g., gardeners who will need to maintain landscaped areas) at the new NAVSEA offices. The DEIS also is insufficient because it completely fails to address the possible effects of the Proposal -- including the presence and activities of construction workers and NAVSEA personnel -- on the contamination.

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The DEIS therefore is also inconsistent with the Navy's own NEPA regulations, which require Navy actions to be consistent with federal policies under other statutory and regulatory schemes. 32 C.F.R. § 775.3(a). To the extent that the DEIS and the Proposal are inconsistent with any federal policies, including policies under the various environmental statutes discussed below as well as federal policies on environmental justice, the DEIS is inadequate under the Navy regulations.

- 1.     The DEIS Does Not Adequately  
Evaluate Risks to Individuals On-Site.**
- a.     The DEIS Does Not Address Critical  
Information on Contamination.**

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The DEIS does not adequately evaluate the risks to construction workers and to personnel in light of the contamination at the Navy Yard. First, the DEIS apparently relies solely on a preliminary assessment report ("PA"), prepared by the Navy in 1993, in considering risks associated with site contamination. See DEIS at 3-27 to 3-28. Since 1993, however, the PA has been